FINAL
SITE INSPECTION PRIORITIZATION REPORT
METZ METALLURGICAL CORP.
SOUTH PLAINFIELD, MIDDLESEX CO. NEW JERSEY

CERCLIS ID No.: NJD002195303

VOLUME 3 OF 3

EPA Contract No.: 68-W5-0019
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JULY 2000

Prepared for:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Prepared by:
Region II Superfund Technical Assessment and Response Team
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Federal Programs Division
Edison, New Jersey 08837

METZSI.WPD

215707

REFERENCE 5

LATITUDE AND LONGITUDE CALCULATION WORKSHEET #2
LI USING ENGINEER'S SCALE (1/60)

SITE NAME: Metz Metallurgical Corp. CERCLIS #: NJD002195303

AKA: Degussa Corp. SSID: _____

ADDRESS: 3900 South Clinton Avenue

CITY: South Plainfield STATE: NJ ZIP CODE: 07080

SITE REFERENCE POINT: warehouse

USGS QUAD MAP NAME: Plainfield TOWNSHIP: ____ N/S RANGE: ____ E/W

SCALE: 1:24,000 MAP DATE: _____ SECTION: ____1/4 ____1/4 ____1/4

MAP DATUM: 1927 1983 (CIRCLE ONE) MERIDIAN: _____

COORDINATES FROM LOWER RIGHT (SOUTHEAST) CORNER OF 7.5' MAP (attach photocopy):

LONGITUDE: 74 ° 22 ' 30 " LATITUDE: 40 ° 30 ' 00 "

COORDINATES FROM LOWER RIGHT (SOUTHEAST) CORNER OF 2.5' GRID CELL:

LONGITUDE: 74 ° 25 ' 00 " LATITUDE: 40 ° 32 ' 30 "

CALCULATIONS: LATITUDE (7.5' QUADRANGLE MAP)

A) NUMBER OF RULER GRADUATIONS FROM LATITUDE GRID LINE TO SITE REF POINT: 259.5

B) MULTIPLY (A) BY 0.3304 TO CONVERT TO SECONDS:

A x 0.3304 = 85 . 74 "

C) EXPRESS IN MINUTES AND SECONDS (1'= 60"): 1 ' 25 . 74 "

D) ADD TO STARTING LATITUDE: 40 ° 32 ' 30 . 00 " + 1 ' 25 . 74 =

SITE LATITUDE: 40 ° 33 ' 55 . 74 "

CALCULATIONS: LONGITUDE (7.5' QUADRANGLE MAP)

A) NUMBER OF RULER GRADUATIONS FROM RIGHT LONGITUDE LINE TO SITE REF POINT: 145.5

B) MULTIPLY (A) BY 0.3304 TO CONVERT TO SECONDS:

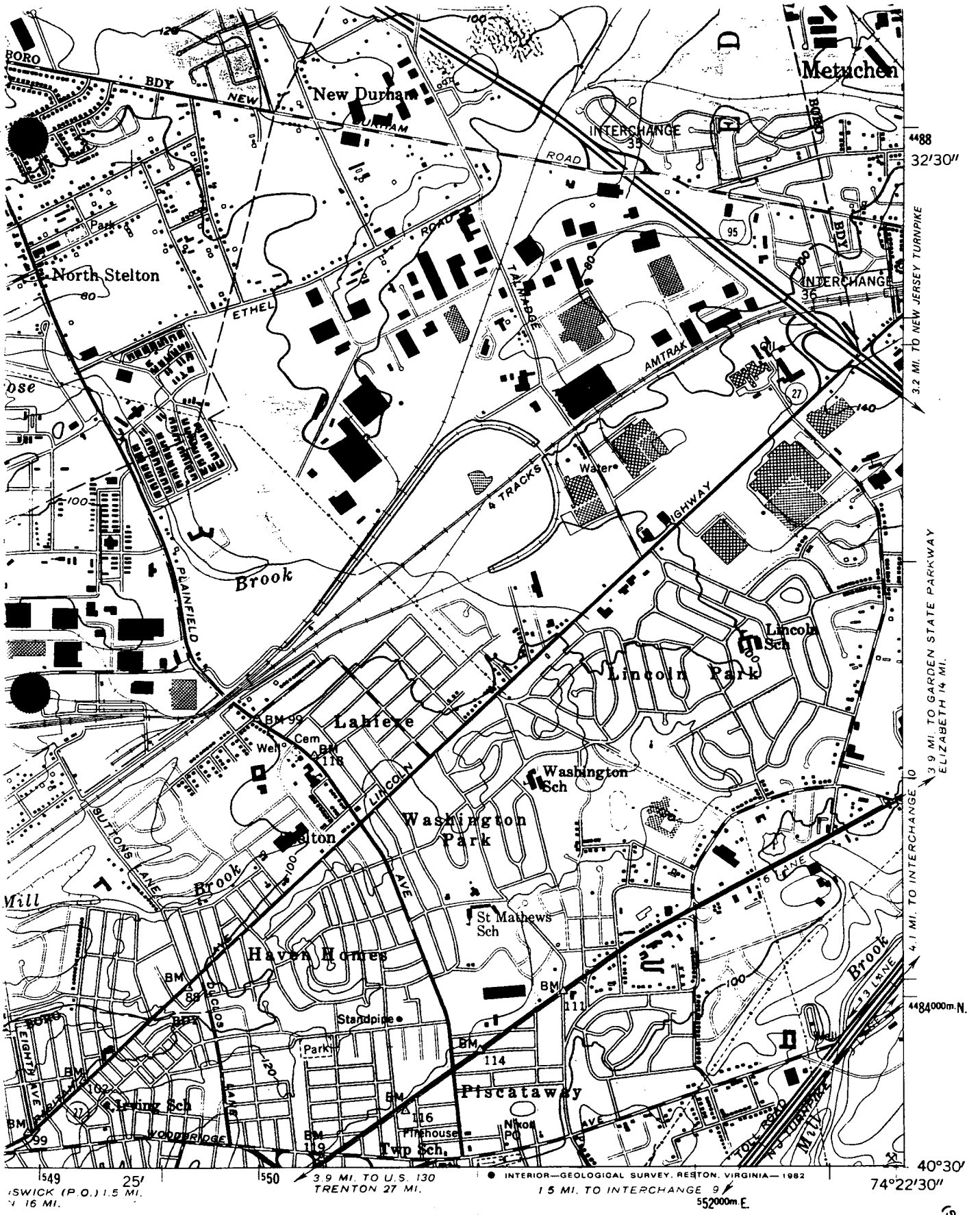
A x 0.3304 = 48 . 07 "

C) EXPRESS IN MINUTES AND SECONDS (1'= 60"): ____ ' 48 . 07 "

D) ADD TO STARTING LONGITUDE: 74 ° 25 ' 00 . 00 " + ____ ' 48 . 07 =

SITE LONGITUDE: 74 ° 25 ' 48 . 07 "

INVESTIGATOR: K. Dorneman DATE: 11/17/98



INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1982

ROAD CLASSIFICATION

Primary highway, all weather, hard surface

Light-duty road, all weather, improved surface

Secondary highway, all weather, hard surface

Unimproved road, fair or dry weather

Interstate Route

U. S. Route

State Route

PLAINFIELD, N. J.

REFERENCE 6

Facility Report

Facil # 0099525 Status A COMU 1222

Facility Address

Name DEGUSSA CORP METZ DIVISION
Street 3900 S CLINTON AVE

City SOUTH PLAINFIELD State NJ Zip 07080
County MIDDLESEX Block Lot

Cycle Number 2B
Balance Due $0.00
Surcharge Due $0.00
Last Cert 4/4/1997
Old Cycle # 03

Operator Address

Name Phone
Street

City State Zip

Owner Address

Name DEGUSSA CORPORATION Former Owner
Street 3900 S CLINTON AVE

City S PLAINFIELD State NJ Zip 07080
Contact C SCOTT EVES Phone 9085611100

EPA ID GEDI Id
Total # tanks 12 Total Gallons 44,022
Facilty type B. Commercial/Industrial
Site plan submitted Y/N? Y Cert Printing Overrule Bill Printing Overrule

Financial Responsibility

Assurance Y/N?
Type
Carrier
Effective
Expiration
Policy #
Policy Amount $

Monit. Sys Q's? (Y/N)
1 2 3 4

Record Keeping Compliance Q's? (Y/N)
1 2 3 4 5 6 7 8 9

First Registration Latitude
Inactivation Longitude

Facil Compliance Type

Facility Notepad

Tank Summary Report

Facil # 0099525 Facil Name DEGUSSA CORP METZ DIVISION Cycle Number 2B

Seq #	ID	Tank Contents	Gallons	Tank Status	Tank Status Date
1	ED	P. OTHER HAZARDOUS SUBSTANCES:	5,000	G. REMOVED	8/6/1999
2	EE	P. OTHER HAZARDOUS SUBSTANCES:	3,000	G. REMOVED	8/6/1999
3	EPS1	P. OTHER HAZARDOUS SUBSTANCES:	3,700	D. EMERGENCY SPILL TANK (SU	1/1/1972
4	EPS2	P. OTHER HAZARDOUS SUBSTANCES:	1,700	D. EMERGENCY SPILL TANK (SU	1/1/1972
5	EPS3	P. OTHER HAZARDOUS SUBSTANCES:	3,090	D. EMERGENCY SPILL TANK (SU	1/1/1972
6	EPS4	P. OTHER HAZARDOUS SUBSTANCES:	1,117	G. REMOVED	8/6/1999
7	EPS5	P. OTHER HAZARDOUS SUBSTANCES:	1,035	G. REMOVED	8/6/1999
8	EPS6	P. OTHER HAZARDOUS SUBSTANCES:	2,150	D. EMERGENCY SPILL TANK (SU	1/1/1985
9	EPS7	P. OTHER HAZARDOUS SUBSTANCES:	1,870	G. REMOVED	8/6/1999
10	EPS8	P. OTHER HAZARDOUS SUBSTANCES:	258	G. REMOVED	8/6/1999
11	EP1	P. OTHER HAZARDOUS SUBSTANCES:	2,000	G. Removed	8/6/1999
12	EP2	P. OTHER HAZARDOUS SUBSTANCES:	2,000	G. Removed	8/18/1999
13	EP3	P. OTHER HAZARDOUS SUBSTANCES:	2,000	G. Removed	8/18/1999
14	EP4	P. OTHER HAZARDOUS SUBSTANCES:	2,000	G. Removed	8/18/1999
15	EQS1	P. OTHER HAZARDOUS SUBSTANCES:	70	G. Removed	8/18/1999
16	EQS2	P. OTHER HAZARDOUS SUBSTANCES:	70	G. Removed	8/18/1999
17	EQS3	P. OTHER HAZARDOUS SUBSTANCES:	70	G. Removed	8/18/1999
18	EQS5	P. OTHER HAZARDOUS SUBSTANCES:	50	G. Removed	8/18/1999
19	ESC1	P. OTHER HAZARDOUS SUBSTANCES:	395	D. EMERGENCY SPILL TANK (SU	1/1/1979
20	ESC2	P. OTHER HAZARDOUS SUBSTANCES:	82	D. EMERGENCY SPILL TANK (SU	1/1/1981
21	ESC3	P. OTHER HAZARDOUS SUBSTANCES:	147	G. REMOVED	8/18/1999
22	ESC4	P. OTHER HAZARDOUS SUBSTANCES:	0	D. EMERGENCY SPILL TANK (SU	1/1/1967
23	ESC5	P. OTHER HAZARDOUS SUBSTANCES:	135	G. REMOVED	8/18/1999
24	ESC6	P. OTHER HAZARDOUS SUBSTANCES:	10,000	G. REMOVED	8/18/1999
25	ESC7	P. OTHER HAZARDOUS SUBSTANCES:	185	D. EMERGENCY SPILL TANK (SU	1/1/1982
26	ESC8	P. OTHER HAZARDOUS SUBSTANCES:	185	D. EMERGENCY SPILL TANK (SU	1/1/1977
27	ESC9	P. OTHER HAZARDOUS SUBSTANCES:	185	D. EMERGENCY SPILL TANK (SU	1/1/1977
28	ESQ4	P. OTHER HAZARDOUS SUBSTANCES:	70	G. REMOVED	8/18/1999
29	ES10	P. OTHER HAZARDOUS SUBSTANCES:	58	D. EMERGENCY SPILL TANK (SU	1/1/1967
30	EXTL	P. OTHER HAZARDOUS SUBSTANCES:	320	D. EMERGENCY SPILL TANK (SU	1/1/1977
31	E2	P. OTHER HAZARDOUS SUBSTANCES:	1,000	G. REMOVED	8/18/1999

State of New Jersey
Department of Environmental Protection
Division of Responsible Party Site Remediation
PO Box 028
Trenton, NJ 08625-0028

TRENTON, NJ 08650 OCR#14 17:59 11/01/99

NOV 1 '99 N.J.

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P.B. METER 6734773

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08837+3703

REFERENCE 7

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM		PROJECT NOTE
TO: Metz Metallurgical Corp. Site File	DATE: 10/26/99	Page 1 of 2
FROM: Kiersten Dorneman		
SUBJECT: Inspections		
REFERENCE Inspection reports attached		

On 26 October 1999, START member Dorneman compiled the inspections conducted at the Metz Metallurgical Corp. (Metz) site.

- 5 February 1982 - A Resource Conservation and Recovery Act (RCRA) treatment, storage and disposal facility (TSDF) inspection was conducted by the New Jersey Department of Environmental Protection (NJDEP) at the Metz facility. It was noted by the inspector that the facility did not have a written inspection schedule, contingency plan for emergency procedures, closure and post-closure plans, or estimate of the cost of closing the facility (Page Nos. 3-15).

- 24 and 25 June 1986 - NJDEP performed a preliminary Environmental Cleanup Responsibility Act (ECRA) inspection. Deficiencies in the sampling plan submitted for the ECRA investigation were reported and the corresponding corrective measures were determined (Page Nos. 16-18).

- 2 July 1987 - NJDEP conducted a RCRA generator inspection at the facility. NJDEP observed that Metz does not conduct semi-annual drills involving all employees and appropriate local authorities to test emergency response capabilities at the facility and that the facility's contingency plan does not include a maintained list of all emergency equipment at the facility (Page Nos. 19-62).

- 29 May 1991 - An interim inspection was performed of the on-going ECRA investigation by the NJDEP. NJDEP observed that after the facility's ownership was transferred to Degussa, the plant's operations continued in the same manner as under Metz. It was noted that acid was spilled and contained in the retention basin. The liquid was flushed with water, pumped into a tank truck, and discharged into the facility's wastewater treatment system for neutralization (Page Nos. 63-65).

- 29 September 1992 - NJDEP conducted a final ECRA inspection at Metz. The inspector recommended no further action for each area of concern that NJDEP had identified. All work required in the cleanup approval letter has been completed (Page Nos. 66-67).

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM		PROJECT NOTE
TO: Metz Metallurgical Corp. Site File	DATE: 10/26/99	Page 2 of 2
FROM: Kiersten Dorneman		
SUBJECT: Inspections		
REFERENCE Inspection reports attached		

- 16 April 1992 - In response to a letter from the facility claiming the precious metals recovery exemption from the Regulation of the Burning of Hazardous Waste in Boilers and Industrial Furnaces, an inspection was conducted by the EPA at the Metz facility to determine if the facility was eligible. The inspector concluded that the requirements have been met by the facility and recommended no further enforcement action (Page Nos. 68-70).

- 30 April 1992 - Alliance Tech conducted a Hazardous Waste inspection for the Division of Hazardous Waste Management, NJDEP. The inspector observed that there was insufficient space between drums in the storage area, that the facility may be exporting hazardous waste to Germany without proper notification and record keeping, and that wetland maybe disrupted without the proper approval or permits (Page Nos. 71-162).

- 27 April 1998 - A RCRA Hazardous Waste Compliance Evaluation Inspection was performed at Metz by an EPA representative. During the inspection Metz indicated that the facility used to generate more that 1000 kilograms (kg) of hazardous waste per month which qualifies the facility as a large quantity generator. It was also observed that three 5-gallon containers holding barium wastes were not tightly closed and that the list of emergency coordinators in the Contingency Plan was not current. Subsequently, a Notice of Violation (NOV) was issued to Metz on 12 August 1998, requesting a written response explaining how the violations have been corrected. In response, Metz indicates in their 18 August 1998 letter that individuals directly involved with the storage of hazardous waste were retrained, and that the Contingency Plan was revised even though the facility has been a small quantity generator, not required to maintain a Contingency Plan, since June 1995 (Page Nos. 163-166).

RCRA TREATMENT, STORAGE AND DISPOSAL FACILITY INSPECTION FORM
FOR TSD FACILITIES ONLY

COMPANY NAME: Metz Metallurgical Corp. EPA I.D. Number: NJD002195303

COMPANY ADDRESS: 3 900 So Clinton Ave / S. Plainfield

COMPANY CONTACT OR OFFICIAL: NOEL Mazar

TITLE: Plant Engineer

OTHER ENVIRONMENTAL PERMITS HELD BY FACILITY: [✓] NPDES [✓] AIR [ ] OTHER

INSPECTOR'S NAME: Bob Dante

DATE OF INSPECTION: 2/5/82

BRANCH/ORGANIZATION: NJDEP

TIME OF DAY INSPECTION TOOK PLACE: 11:30 AM

(1) Is there reason to believe that the facility has hazardous waste on site? Yes

a. If yes, what leads you to believe it is hazardous waste? Check appropriate box:

[✓] Company admits that its waste is hazardous during the inspection.

[✓] Company admitted the waste is hazardous in its RCRA notification and/or Part A Permit Application.

[✓] The waste material is listed in the regulations as a hazardous waste from a nonspecific source (§261.31)

[ ] The waste material is listed in the regulations as a hazardous waste from a specific source (§261.32)

[✓] The material or product is listed in the regulations as a discarded commercial chemical product (§261.33)

[✓] EPA testing has shown characteristics of ignitability, corrosivity, reactivity or extraction procedure toxicity, or has revealed hazardous constituents (please attach analysis report)

[ ] Company is unsure but there is reason to believe that waste materials are hazardous. (Explain)

	YES	NO	DON'T KNOW
b. Is there reason to believe that there are hazardous wastes on-site which the company claims are merely products or raw materials?		✓	

Please explain:

c. Identify the hazardous wastes that are on-site, and estimate approximate quantities of each.

	YES	NO	DON'T KNOW
(2) Does the facility generate hazardous waste?		✓	
(3) Does the facility transport hazardous waste?		✓	
(4) Does the facility treat, store or dispose of hazardous waste?	✓		

VISUAL OBSERVATIONS

	YES	NO	DON'T KNOW
(5) SITE SECURITY (§265.14)			
a. Is there a 24-hour surveillance system?	✓		
b. Is there a suitable barrier which completely surrounds the active portion of the facility? yes / Fence			
c. Are there "Danger-Unauthorized Personnel Keep Out" signs posted at each entrance to the facility?		✓	
(6) Are there ignitable, reactive or incompatible wastes on site? (§265.27)	✓		
a. If "YES", what are the approximate quantities?			
b. If "YES", have precautions been taken to prevent accidential ignition or reaction of ignitable or reactive waste?	✓		
c. If "YES", explain			
d. In your opinion, are proper precautions taken so that these wastes do not:			
- generate extreme heat or pressure, fire or explosion, or violent reaction?	✓		
- produce uncontrolled toxic mists, fumes, dusts, or gases in sufficent quantities to threaten human health?	✓		
- produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions?	✓		
- damage the structural integrity of the device or facility containing the waste?	✓		
- threaten human health or the environment?	✓		

Please explain your answers, and comment if necessary.

e. Are there any additional precautions which you would recommend to improve hazardous waste handling procedures at the facility?

(7) Does the facility comply with preparedness and prevention requirements including maintaining: (§265.32)

	YES	NO	DON'T KNOW
- an internal communications or alarm system?	✓		
- a telephone or other device to summon emergency assistance from local authorities?	✓		
- portable fire equipment?	✓		
- adequate aisle space?	✓		
- in your opinion, do the types of wastes on site require all of the above procedures, or are some not needed? Explain. They have all of the above	✓		

In your opinion, do the types of wastes on site require all of the above procedures, or are some not needed? Explain. see above

*(8) Have you inspected to verify that the groundwater monitoring wells (if any) mentioned in the facility's groundwater monitoring plan (see no. 19 below) are properly installed?	NA		
If you have, please comment, as appropriate.			
(9) a. Is there any reason to believe that groundwater contamination already exists from this facility? If "YES", explain.		✓	
b. Do you believe that operation of this facility may affect groundwater quality?			✓
c. If "YES", explain.			

RECORDS INSPECTION

(10) Has the facility received hazardous waste from an off-site source since Nov. 19, 1980 (effective date of the regulations)?	NA		
a. If "YES", does it appear that the facility has a copy of a manifest for each hazardous waste load received?			
b. How many post-November 19 manifests does it have? (If the number is large, you may estimate)			
c. Does each manifest (or a representative sample) have the following information?			
- a manifest document number	✓		

	YES	NO	DON'T KNOW
the generator's name, mailing address, telephone number, and EPA identification number	✓		
the name, and EPA identification number of each transporter	✓		
the name, address and EPA identification number of the designated facility and an alternate facility, if any;	✓		
- a DOT description of the wastes	✓		
- the total quantity of each hazardous waste by units of weight or volume, and the type and number of containers as loaded into or onto the transport vehicle	✓		
- a certification that the materials are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation under regulations of the Department of Transportation and the EPA	✓		
Are there any indications that unmanifested hazardous wastes have been received since November 19, 1980? If YES, explain.		✓	
Does the facility have a written waste analysis plan specifying test methods, sampling methods and sampling frequency? (§265.13)		✓	
a. Does the character of wastes handled at the facility change from day to day, week to week, etc., thus requiring frequent testing? (You may check more than one) Waste characteristics vary ____ All wastes are basically the same ✓ Company treats all waste as hazardous ____ Don't Know ____			
b. Does hazardous waste come to this facility from off-site sources?		✓	
c. If waste comes from an off-site source, are there procedures in the plan to insure that wastes received conform to the accompanying manifest?	✓		
12) INSPECTIONS (§265.15)			
a. Does the facility have a written inspection schedule?		✓	
b. Does the schedule identify the types of problems to be looked for and the frequency for inspections?			
c. Does the owner/operator record inspections in a log?			
d. Is there evidence that problems reported in the inspection log have not been remedied? If "YES," please explain.			

	YES	NO	DON'T KNOW
(13) PERSONNEL TRAINING (§265.16)			
a. Is there written documentation of the following:			
- job title for each position at the facility related to hazardous waste management and the name of the employee filling each job?		✓	
- type and amount of training to be given to personnel in jobs related to hazardous waste management?			
- actual training or experience received by personnel?			
(14) Does the facility have a written contingency plan for emergency procedures designed to deal with fires, explosion or any unplanned release of hazardous waste? (§265.51)		✓	
a. Does the plan describe arrangements made with local authorities?	✓		
b. Has the contingency plan been submitted to local authorities?			
How do you know?			
c. Does the plan list names, addresses, and phone numbers of Emergency Coordinators?			
d. Does the plan have a list of what emergency equipment is available?			
e. Is there a provision for evacuating facility personnel?			
f. Was an Emergency Coordinator present or on call at the time of the inspection?			
(15) Does the owner/operator keep a written operating record with: (§265.73)			
- a description of wastes received with methods and dates of treatment, storage or disposal?	N/A		
- location and quantity of each waste?	N/A		
- detailed records and results of waste analysis and treatability tests performed on wastes coming into the facility?	N/A		
- detailed operating summary reports and description of all emergency incidents that required the implementation of the facility contingency plan?	N/A		
*(16) Does the facility have written closure and post-closure plans? (§265.110)			✓
a. Does the written closure plan include:			
- a description of how and when the facility will be partially (if applicable) and ultimately closed?			

* Effective date for this requirement is May 19, 1981.

	YES	NO	DON'T KNOW
- an estimate of the maximum inventory of wastes in storage or treatment at any time during the life of the facility?	___	___	___
- a description of the steps necessary to decontaminate facility equipment during closure?	___	___	___
- a schedule for final closure including the anticipated date when wastes will no longer be received and when final closure will be completed?	___	___	___
b. What is the anticipated date for final closure?	___	___	___
†c. Does the owner/operator have a written post-closure plan identifying the activities which will be carried on after closure and the frequency of these activities?	NA	___	___
d. Does the written post-closure plan include:			
- a description of planned groundwater monitoring activities and their frequencies during post-closure?	___	___	___
- a description of planned maintenance activities and frequencies to ensure integrity of final cover during post-closure?	___	___	___
- the name, address and phone number of a person or office to contact during post-closure?	___	___	___
*(17) Does the owner/operator have a written estimate of the cost of closing the facility? (§265.142) What is it?	___	✓	___
*(18) Does the owner/operator have a written estimate of the cost for post-closure monitoring and maintenance?	NA	___	___
What is it? (§265.144)	NA	___	___
*(19) Has a groundwater monitoring plan been submitted to the Regional Administrator for facilities containing a surface impoundment, landfill or land treatment process? (This requirement does not apply to recycling facilities.) (§265.90)			
a. Does the plan indicate that at least one monitoring well has been installed hydraulically upgradient from the limit of the waste mangement area?	___	___	___
b. Does the plan indicate that there are at least three monitoring wells installed hydraulically downgradient at the limit of the waste management area?	___	___	___

† This section applies only to disposal facilities.

* Effective date for this requirement is May 19, 1981.

SITE-SPECIFIC

Please circle all appropriate activities and answer questions on indicated pages for all activities circled. When you submit your report, include only those site-specific pages that you have used.

STORAGE	TREATMENT	DISPOSAL
Waste Pile p. 9	Tank p. 8	Landfill pp. 10-11
Surface Impoundment p. 8	Surface Impoundment pp. 8-9	Land Treatment pp. 9, 10
Container p. 7	Incineration pp. 12-13	Surface Impoundment p. 8
Tank, above ground p. 8	Thermal Treatment pp. 12-13	Other _____
Tank, below ground p. 8	Land Treatment pp. 9-10	
Other _____	Chemical, Physical p. 13 and Biological Treatment (other than in tanks, surface impoundment or land treatment facilities)	
	Other _____	

CONTAINERS (§265.170)

	YES	NO	DON'T KNOW
1. Are there any leaking containers? If "YES", explain.		✓	
2. Are there any containers which appear in danger of leaking? If "YES", explain.		✓	
3. Do wastes appear compatible with container materials?	✓		
4. Are all containers closed except those in use?	✓		
5. Do containers appear to be opened, handled or stored in a manner which may rupture the containers or cause them to leak?		✓	
6. How often does the plant manager claim to inspect container storage areas? [illegible]			
7. Does it appear that incompatible wastes are being stored in close proximity to one another? If "YES", explain.		✓	
8. Are containers holding ignitable or reactive wastes located at least 15 meters (50 feet) from the facility's property line?	✓		
9. What is the approximate number and size of containers with hazardous wastes? 4 [illegible] drums			

TANKS (§265.190)	YES	NO	DON'T KNOW
1. Are there any leaking tanks? If "YES", explain.	___	___	___
2. Are there any tanks which appear in danger of leaking. If "YES", explain.	___	___	___
3. Are wastes or treatment reagents being placed in tanks which could cause them to rupture, leak, corrode or otherwise fail? If "YES", explain.	___	___	___
4. Do uncovered tanks have at least 2 feet of freeboard or an adequate containment structure?	___	___	___
5. Where hazardous waste is continuously fed into a tank, is the tank equipped with a means to stop this inflow?	___	___	___
6. Does it appear that incompatible wastes are being stored in close proximity to one another, or in the same tank? If "YES", explain.	___	___	___
7. How often does the plant manager claim to inspect container storage areas?			
8. Are ignitable or reactive wastes stored in a manner which protects them from a source of ignition or reaction? If "YES", explain.	___	___	___
9. What is the approximate number and size of tanks containing hazardous wastes?			

SURFACE IMPOUNDMENTS (§265.220)			
1. Is there at least 2 feet of freeboard in the impoundment?	___	___	___
2. Do all earthen dikes have a protective cover to preserve their structural integrity? If "YES", specify type of covering.	___	___	___
3. Is there reason to believe that incompatible wastes are being placed in the same surface impoundment? If "YES", explain.	___	___	___

	YES	NO	DON'T KNOW
4. Are ignitable or reactive wastes being placed in surface impoundments without being treated to remove these characteristics? If "YES", explain.	___	___	___
5. Are there any leaks, failures or is there any deteriorization in the impoundments? If "YES", explain.	___	___	___
6. Give the approximate size of surface impoundments (gallons or cubic feet).			

WASTE PILES (§265.250)

1. Is the waste pile protected from wind erosion?	___	___	___
a. Does it appear to need such protection?	___	___	___
b. Explain what type of protection exists.			
2. Does it appear that incompatible wastes are being stored in the same waste pile? If "YES", explain.	___	___	___
3. Is leachate run-off from a pile a hazardous waste? If "YES", explain this determination and answer (a) and (b) below.	___	___	___
a. Is the pile placed on an impermeable base that is compatible with the waste?	___	___	___
b. Is the pile protected from precipitation and run-on?	___	___	___
4. In your judgment, are ignitable or reactive wastes managed in such a way that they are protected from any material or conditions which may cause them to ignite? Please explain or indicate if no such wastes are present.	___	___	___
Are they placed on an existing pile so that they no longer meet the definition of ignitable or reactive waste? Please explain.	___	___	___

5. How many waste piles are on site, and approximately how large are they?

LAND TREATMENT (§265.270)

1. Can the facility operator demonstrate that the hazardous waste has been made less or non-hazardous by biological degradation or chemical reactions occurring in or on the soil? Please explain.	___	___	___

	YES	NO	DON'T KNOW
*2. Is run-on diverted away from the active portions of the land treatment facility?	___	___	___
*3. Is run-off collected?	___	___	___
4. Are food chain crops being grown on the facility property?	___	___	___
a. If "YES", can the facility operator document that arsenic, lead and mercury:			
- will not be transferred to the crop or ingested by food chain animals or	___	___	___
- will not occur in greater concentrations in the crops grown on the land treatment facility than in the same crops grown on untreated soils.	___	___	___
b. Has notification of the growing of the food chain crops been made to the Regional Administrator?	___	___	___
5. Is there a written and implemented plan for unsaturated zone monitoring?	___	___	___
6. Are there records of the application dates, application rates, quantities and location of each hazardous waste placed in the facility?	___	___	___
7. Do the closure and post-closure plans address:			
a. control of migration of hazardous wastes into the groundwater?	___	___	___
b. control of run-off, release of airborne particulate contaminants?	___	___	___
c. compliance with requirements for the growth of food-chain crops (if they are present)?	___	___	___
8. Is ignitable or reactive waste immediately incorporated into the soil so the resulting waste no longer meets that definition? If "YES", explain.	___	___	___
9. Are incompatible wastes placed in the same land treatment area? If "YES", explain.	___	___	___
10. What is the area of the land receiving hazardous waste treatment?	___	___	___

LANDFILLS (§265.300)

†1. Is run-on diverted away from the active portions of the landfill?	___	___	___
†2. Is run-off from active portions of the landfill collected?	___	___	___

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* Effective date for these requirements is May 19, 1981.

† These requirements are effective November 19, 1981.

	YES	NO	DON'T KNOW
3. Is waste which is subject to wind dispersal controlled? Explain.	___	___	___
4. Does the owner/operator maintain a map with:			
- the exact location and dimensions of each cell	___	___	___
- the contents of each cell and approximate location of each hazardous waste type	___	___	___
5. Do the closure and post-closure plans address:			
- control of pollutant migration via ground water?	___	___	___
- control of surface water infiltration?	___	___	___
- prevention of erosion?	___	___	___
6. Is ignitable or reactive waste treated before being placed in the landfill? Explain how you know.	___	___	___
7. Are precautions taken to insure that incompatible wastes are not placed in the same landfill cell? If"NO", explain.	___	___	___
8. Are bulk or non-containerized wastes containing free liquids placed in the landfill? If "YES",	___	___	___
a. Does the landfill have a liner which is chemically and physically resistant to the added liquid?	___	___	___
b. Is the waste treated and stabilized so that free liquids are no longer present?	___	___	___
*9. Are containers holding liquid waste or waste containing free liquids placed in the landfill?	___	___	___
10. Are empty containers (e.g. those containing less than 1/2 inch of liquid) placed in the landfills?	___	___	___
If so, are they crushed flat, shredded or similarly reduced in volume before they are buried?	___	___	___

11. What is the approximate area of the hazardous waste landfill?

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* Effective date for this requirement is November 19, 1981.

INCINERATORS AND THERMAL TREATMENT
(§§265.340 and 265.379)

	YES	NO	DON'T KNOW
1. What type of incinerator or thermal treatment is at the site (e.g. waterwall incinerator, boiler, fluidized bed, etc.)?			
2. Was hazardous waste being incinerated or thermally treated during your inspection? If "YES", answer all following questions. If "NO", answer only questions 3 and 7.	___	___	___
3. Has waste analysis been performed (and written records kept) to include:			
- heating value of the waste	___	___	___
- halogen content	___	___	___
- sulfur content	___	___	___
- concentration of lead	___	___	___
- concentration of mercury	___	___	___

NOTE: Waste analysis need not be performed on each waste load if if there are documented data available to show waste characteristics that do not vary. If there are such documented data available, check here [ ].

4. Does it appear that the owner/operator brings his thermal treatment process to steady state (normal) conditions of operation before introducing hazardous wastes?	___	___	___
5. Did it appear during your inspection that there was adequate monitoring and inspection by owner/operator every 15 minutes during hazardous waste incineration for:			
- waste feed	___	___	___
- auxiliary fuel feed	___	___	___
- air flow	___	___	___
- incinerator temperature	___	___	___
- scrubber flow	___	___	___
- scrubber pH	___	___	___
- relevant level controls	___	___	___
Every hour for:			
- stack plume (color and opacity)	___	___	___
5. Is there open burning of hazardous waste?	___	___	___

a. If "YES", what is being burned? (only burning or detonation of explosives is permitted)

b. If open burning or detonation of explosives is taking place, approximately what is the distance from the open burning or detonation to the property of others?

	YES	NO	DON'T KNOW
6. Does the incinerator appear to be operating properly? (Do emergency shutdown controls and system alarms seem to be in good working order?) Please explain.	___	___	___
a. Is there any evidence of fugitive emissions?	___	___	___
7. Is the residue from the incinerator treated by the owner as a hazardous waste? Please explain.	___	___	___

8. What types of air pollution control devices (if any) are installed on the incinerator?

CHEMICAL, PHYSICAL AND BIOLOGICAL TREATMENT (§265.400)

1. Does the treatment process system show any signs of ruptures, leaks, or corrosion? Please explain.	___	___	___
2. Is there a means to stop the inflow of continuously-fed hazardous wastes?	___	___	___
3. Is there ignitable or reactive waste fed into the treatment system?	___	___	___
If "YES", has it been treated or protected from any material or conditions which may cause it to ignite or react? If so, explain how.	___	___	___
Are the incompatible wastes placed in the same treatment process? If "YES", explain.	___	___	___

5. Describe the treatment system at this facility.

Bureau of Industrial Site Evaluation
Environmental Cleanup Responsibility Act

Report of Inspection

ECRA Case #86108 Date of Inspection 6/24 & 6/25/86
Inspection Category: Preliminary
Inspector: Michael Surowiec

Industrial Establishment: Metz Metallurgical Corporation

Location: 3900 South Clinton Ave., South Plainfield, Middlesex County

Individuals Involved: Rob Lux - DWR
Tom Gillespie - BEERA
Scott Eves - Representative, Metz Corp.
Paul Dahlgren - Agent, Environics
Sam Mastrull - Office of Business Advocacy

NARRATIVE DESCRIPTION

6/24/86 - Arrived on site at 10:10 a.m. The weather was overcast 68°F. The above referenced persons were present for an inspection of the grounds, and part of the interiors of the buildings. Departed Site at 3:00 p.m.

6/25/86 - Arrived on site at 9:50 a.m. The weather was warm 65°F. Met with Mr. Eves, Mr. Dahlgren, and Mr. Mastrull for an inspection of remaining property. Departed at 11:50 a.m.

DEFICIENCIES NOTED

1. Aerial photographs taken over Metz Metallurgical December 3, 1979 indicate that the driveway along the south perimeter of building A was unpaved. Stacked drums were noted inside the fence adjacent to this open ground.

2. Aerials also indicate that the entire area surrounding building B was unpaved. Heavy equipment and drums/containers were apparently stored here; the soil appeared to be discolored in places. Only one random sample has been proposed for this location.

3. Pipes possibly connected to an underground storage tank were noted inside building B along its north wall. An area immediately outside the building was repaved. This area could approximately accommodate an excavation pit for a 2,000 gallon tank.

4. Analytical results of a waste water sample collected June 12, 1980, as part of a Water Resources inspection, indicated that hazardous volatile constituents of xylene and chlorobenzene were discharged to a stream at the rear of Metz Metallurgical. The duration of this unpermitted discharge is unknown. Metz continues to use Aromatic 100 (4% xylene) and other petroleum solvents as part of their silver flake operation. The wastes generated from this operation are reportedly discharged to the sewer line after treatment. No sampling for volatiles has been proposed for the NJPDES discharge area.

5. The concrete pad located at the rear of building A, which is used for raw product storage, was recently bermed in an effort to control erosion of its edge from chemical spills. No sampling is proposed for the gravel along the base of the pad.

6. Two unidentified pipes were noted along the wall behind the trailers at the rear of building A (adjacent to catalyst storage area). The gravel below these pipes appeared to be water saturated.

7. Discolored soil/gravel was noted at the rear of building A near the empty drum storage area (doorway of the refining area).

8. A direct line to the POTW with a large screw cap was noted in the pretreatment area at the rear of building A. An inspection of Metz was performed by the South Plainfield Health Department on November 30, 1982 in response to the report of a chemical reaction in an adjacent sewer. Apparently a caustic solution from one of the wet wall scrubbers was released to the sewer without appropriate treatment according to representatives of Metz. These facts justify a closer examination of the intregrity of sewer lines on Metz's property.

9. Minor oil sheens were noted in the stream bed of the NJDPES discharge area. Quarterly reports logged at Water Resources indicate previous discharges (12/1/82, 11/19/84) of petroleum hydrocarbons and suspended solids above permitted limits. The suspended solids have been identified by Metz (letter 5/3/83) as alumina (spent base catalyst). A minor discharge residue of this alumina was noted during the inspection on the pavement of the north side of building A (near the pretreatment area).

ACTIONS REQUIRED ON THE PART OF THE APPLICANT

1. Additional sampling is required along the perimeter of the fence line beginning midway down the south side of building A. Borings should be taken using an impact split spoon sampler (without hollow stem auger) to avoid excessive pavement disturbance. The required parameters of analysis will be Petroleum Hydrocarbons, PCBs, 13 priority pollutant metals, and volatile organics plus 15. The VOs should be collected in the 18"-24" increment below grade of the natural soil. The other samples should be collected in the 0-6" increment.

2. Additional sampling is necessary here following the guidelines of #1 above.

3. Identify the previous use of pipes. If the pipes did in fact service an underground storage tank, copy BISE with documentation on its age, construction, and use. Borings and appropriate analyses will be required to confirm the presence or absence of contamination.

4. Copy BISE with documentation and details on the history/duration of this discharge, as well as a description of the contributing waste streams. Additional sampling for volatile organics plus 15 will be required along the stream bed and banks. The samples should not be taken immediately in front of the discharge outfall pipe as this is the least likely area for contaminants to settle out and entrain themselves in the sediments. The Sampling Plan should be modified as appropriate.

5. A minimum of 3 samples will be required along the base of the pad. Sampling should conform to guidelines addressed in #1 above.

6. Identify the use of the pipes.

7. Address as in 5 above.

8. Submit detailed information on the construction and distribution of sewer lines at Metz. This should include, but not be limited to, original blue prints and information about low points and sediment traps.

9. Identify the exact discharge point(s) and source(s) of the alumina and oil and locate them on a site map. Identify the chemical composition of the carrier fluid associated with the alumina.

ACTIONS REQUIRED ON THE PART OF BISE

1. Contact the Middlesex County Sewerage Authority to check requirements for verification of sewer line integrity and requirements for proper security of open lines not connected to treatment units.

2. Contact Division of Environmental Quality to verify reports of recent air emission violations at Metz Metallurgical.

Inspector/Case Manager Signature _____

Approved: _____, Supervisor
Bureau of Industrial Site Evaluation

Form DW 4-029
3/84

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT

INSPECTION REPORT

REPORT PREPARED FOR:

- [x] Generator
- [ ] Transporter
- [ ] HWM (TSD) Facility

RFA inspection

FACILITY INFORMATION

Name: Metz Metallurgical Corp

Address: 3900 S. Clinton Ave
S. Plainfield

Lot: _____ Block: _____

County: Middlesex

Phone: 201-561-1100

EPA ID#: NJD002195303

Date of Inspection: July 2, 1987

PARTICIPATING PERSONNEL

State or EPA Personnel: Jennifer Meyer - NJDEP

Facility Personnel: C. Scott Evans - Manager
Environmental Control &
Metal Recovery Department

Report Prepared by Name: Jennifer Meyer

Region: Central

Telephone#: 609-426-0700

Reviewed by: Linda Z. Jones

Date of Review: 7-27-87

FACILITY NAME: Metz Metallurgical Corp

ADDRESS: 3900 S. ~~Plainfield~~ Clinton Ave
S. Plainfield

TIME IN: _____ COUNTY: Middlesex

TIME OUT: _____ EPA ID : NJD002195503

DATE OF INSPECTION: July 2, 1987

PHOTOS TAKEN ☐ YES ☑ NO

If yes, how many? _____

SAMPLE TAKEN ☐ YES ☑ NO NO. OF SAMPLES _____

NJDEP ID # _____

MANIFESTS REVIEWED ☑ YES ☐ NO

Number of manifests in compliance all

Number of manifests not in compliance —

List manifest document numbers of those manifests not in compliance.

SUMMARY OF FINDINGS

FACILITY DESCRIPTION AND OPERATIONS

Metz Metallurgical is a business industrial metals fabricates and refines. Ninety-five percent (95%) of operations involves extracting silver from used catalyst from anti-freeze manufacturers. Metz uses chemicals to dissolve the catalyst and then the metal is precipitated out for recovery. Two products result from this process: silver and alumina oxide substrate. The substrate is sold to the same paper industry

Metz has been ~~to~~ at this South Plainfield location since 1965 and employs 250 people. Operations are on weekdays only in 1 9 hour shift. There are two buildings ~~with~~ on adjacent properties owned by Metz, one for processing and the other for offices.

Raw materials (chemicals) stored on site includes Nitric Acid, Hydrochloric Acid, liquid oxygen, liquid nitrogen, sodium hydroxide and potassium hydroxide.

Metz deals with four waste haulers: Mansol for waste oil, Baum-Allied for freon (the TSD facility is Mansol) ATEC for labpack material and Safety Kleen for parts cleaner.

Describe the activities that result in the generation of hazardous waste.

machinery gear box - lub oil
parts washer - Safety Kleen
$ degreasing - ~~[illegible]~~ freon

lab packs → bench lab waste 1 time / year

Identify the hazardous waste located on site, and estimate the approximate quantities of each.
(Identify Waste Codes)

4 drums (full) waste oil 1 accum drum
2 drums acetone → Marisol D001 not normal
waste stream

GENERATOR INSPECTION CHECKLIST

		YES	NO	N/A
7:26-8.5	Hazardous waste determination			
	(a) Did the generator test its waste to determine whether it is hazardous?		✓	
	Is the waste hazardous?			✓
7:26-8.5(b)2	Is the generator determining that its waste exhibits a hazardous waste characteristic(s) based on its knowledge of the material(s) or processes used?	✓		
	Has hazardous waste been shipped off site since November 19, 1980?	✓		
	If yes, how many shipments, off site, have been made and describe the approximate size of an average shipment made on a monthly basis. If facility is a small quantity generator, please explain.			
	~ 18 shipments / year (mostly Safety Kleen mat.)			
7:26-7.4(a)1	Does the generator have an EPA ID #?	✓		
7:26-7.4(a)4	Does each manifest have the following information? Please circle the elements missing and obtain a copy of the incomplete manifests. (List those manifests that are deficient)	✓		
7:26-7.4(a)4i	The generator's name, address and phone number?	✓		
7:26-7.4(a)4ii	The generator's EPA ID number?	✓		
7:26-7.4(a)4iii	The transporter(s) name, address and phone number?	✓		
7:26-7.4(a)4iv	The transporter(s) EPA ID number?	✓		
7:26-7.4(a)4v	The name, address and phone number of the designated TSD facility?	✓		
7:26-7.4(a)4vi	The TSDF's EPA ID number?	✓		
7:26-7.4(a)4vii	The name, type and quantity of hazardous waste being shipped, including such particulars as may be required regarding same?	✓		

23

		YES	NO	N/A
7:26-7.4(a)4viii	Special handling instructions and any other information required on the form to be shipped by the generator?	✓		
7:26-7.4(a)5	Before allowing the manifested waste to leave the generator's property, did the generator:			
7:26-7.4(a)5i	Sign the manifest certification by hand?	✓		
7:26-7.4(a)5ii	Obtain the handwritten signature of the initial transporter and date of acceptance on the manifest?	✓		
7:26-7.4(a)5iii	Retain one copy and forward one copy to the state of origin and one copy to the state of destination?	✓		
7:26-7.4(a)5iv	Give remaining copies of the manifest form to the transporter?	✓		
7:26-7.4(f)1	Has the generator maintained facility records for three (3) years? (Manifest(s), exception report(s) and waste analysis)	✓		
7:26-7.4(h)1	Has the generator received signed copies of portion B (from the TSD facility) of all manifests for waste shipped off site more than 35 days ago?	✓		
7:26-7.4(h)2	If not:			
	1. Did the generator contact the hauler and/or the owner or operator of the TSDF and the NJDEP at 609-292-9877 to inform the NJDEP of the situation, and			✓
	2. Have exception reports been submitted to the Department covering any of these shipments made more than 45 days ago?			✓
	Before transporting or offering hazardous waste for transportation off site, does the generator?			
7:26-7.2(a)	Conspicuously lable appropriate manifest numbers on all hazardous waste containers that are intended for shipment?	✓		
7:26-7.2(b)	Insure that all containers used to transport hazardous waste off site are in conformance with applicable DOT regulations (i.e., 49 CFR 171 - 49 CFR 179)?	✓		

		YES	NO	N/A
7:26-9.3	Accumulation time			
	How is waste accumulated on site?			
	☑ Containers 55 gal 30 gal Safety Kleen Pkt			
	☐ Tanks (complete HWMF checklist)			
	☐ Aboveground ☐ Below ground			
	☐ Surface impoundments (complete HWMF checklist			
	☐ Piles (complete HWMF checklist)			
7:26-9.3(a)3	Is each container clearly dated with each period of accumulation so as to be visible for inspection?	✓		
7:26-9.3(a)1	Is waste accumulated for more than 90 days?		✓	
	If yes, complete HWMF checklist.			

STOP HERE IF THE HAZARDOUS WASTE MANAGEMENT FACILITY (TSD) CHECKLIST IS FILLED OUT.

25

SHORT TERM ACCUMULATION STANDARDS (FOR GENERATORS WHO ACCUMULATE WASTE IN CONTAINERS FOR 90 DAYS OR LESS)

		YES	NO	N/A
7:26-9.4	Containers			
	What type of containers are used for storage. Describe the size, type and quantity and nature of waste (e.g., 12 fifty five gallon drums of waste acetone).			
7:26-9.4(d)1i	Do the containers appear to be in good condition, not in danger of leaking?	✓		
	If no, please describe the type, condition and number of leaking or corroded containers. Be detailed and specific.			
7:26-9.4(d)4i	Are all containers securely closed except those in use?	✓		
7:26-9.4(d)4iii	Do containers appear to be properly handled or stored in a manner which will minimize the risk of the container rupturing or leaking?	✓		
7:26-9.4(d)4iv	Are containerized hazardous waste segregated in storage by waste type?	✓		
7:26-9.4(d)4v	Is every container arranged so that its identification label is visible?	✓		
7:26-9.4(d)5	Is the storage area inspected at least daily?	✓		
7:26-9.4(d)6	Are containers holding ignitible and reactive wastes located at least 50 feet (15 meters) from the facility's property line?	✓		
7:26-11.2	Tanks			
7:26-12.1(a)	Does the generator store hazardous waste in tanks?			✓
	If yes, what are the approximate number and size of tanks containing hazardous waste?			
	Identify the waste treated/stored in each tank.			

		YES	NO	N/A
	General Operating Requirements			
7:26-11.2(a)2	Are the tanks maintained so that there is no evidence of past, present, or risk of future leaks?	___	___	___
	If no, please explain.			
	Are there leaking tanks?	___	___	___
7:26-11.2(a)2	Are all hazardous wastes or treatment reagents being placed in tanks compatible with the tank material so that there is no danger or ruptures, corrosion, leaks or other failures?	___	___	___
7:26-11.2(3)	Do uncovered tanks have at least 2 feet of freeboard or an adequate containment structure?	___	___	___
7:26-11.2(a)4	If waste is continuously fed into a tank, is the tank equipped with a means to stop the inflow from the tank, e.g., bypass system to a standby tank?	___	___	___
7:26-11.2(d)	Inspections			
	Is the tank(s) inspected each operating day for:			
	1. Discharge control equipment	___	___	___
	2. Monitoring equipment	___	___	___
	3. Level of waste in tank	___	___	___
	4. Construction of materials of the tank	___	___	___
	5. Are the tanks and surrounding areas (e.g., dike) inspected weekly for leaks, corrosion or other failures?	___	___	___
7:26-9.2(b)	Are there underground tanks used to store hazardous waste?	___	___	___
	If yes, how many and can they be entered for inspection?	___	___	___
7:26-11.2(e)	Are ignitible or reactive wastes stored in a manner which protects them from a source of ignition or reaction?	___	___	___
	If no, please explain.			

27

		YES	NO	N/A
7:26-11.2(f)	Does it appear that incompatible wastes are being stored separate from each other?			✓
7:26-9.4(g)4	Personnel training			
	Have facility personnel successfully completed a program of classroom instruction or on-the-job training since six months after the date of their employment or assignment to the facility or to a new position at the facility?	✓		
7:26-9.4(g)2	Is the program directed by a person trained in hazardous waste management procedures and does it include instruction which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed?	✓		
7:26-9.4(g)5	If yes, have facility personnel taken part in an annual review of the initial training?	✓		
	Is there written documentation of the following:			
7:26-9.4(g)6i	Job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job?	✓		
7:26-9.4(g)6ii	A written job description for each position related to hazardous waste management?	✓		
7:26-9.4(g)6iii	A written description of the type and amount of both introductory and continuing training that has been and will be given to personnel in jobs related to hazardous waste management?	✓		
7:26-9.4(g)6iv	Documentation of actual training or experience received by personnel?	✓		
7:26-9.4(g)7	Are training records kept on all current employees until closure of the facility and training records kept on former employees for three years from their last date of employment?	✓		
7:26-9.4(g)8	Are semi-annual drills conducted involving all employees and appropriate local authorities to test emergency response capabilities at the facility in accordance with the contingency plan and emergency procedures development pursuant to NJAC 7:26-9.7?		✓	

has been working on having drills currently has [illegible] problems - no [illegible] relief

28

		YES	NO	N/A
7:26-9.6	Preparedness and prevention			
	Does the facility comply with preparedness and prevention requirements including maintaining:			

		YES	NO	N/A
7:26-9.6(b)1	An internal communications or alarm system?	✓		
7:26-9.6(b)2	A telephone or other device to summon emergency assistance from local authorities?	✓		
7:26-9.6(b)3	Portable fire equipment, spill control equipment, and decontamination equipment?	✓		
7:26-9.6(b)4	Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems?	✓		
7:26-9.6(c)	Is equipment tested and maintained?	✓		
7:26-9.6(d)1	Is there immediate access to communications or alarm systems during handling of hazardous waste?	✓		
7:26-9.6(e)	Adequate aisle space to allow unobstructed movement of personnel fire protection equipment, spill control equipment and decontamination equipment?	✓		
	If no, please explain.			
	In your opinion, do the types of waste on site require all of the above procedures, or are some not required?	✓		
	Explain.			
7:26-9.6(f)	Has the facility made the following arrangements, as appropriate for the type of waste handled on site:			
7:26-9.6(f)1	Familiarize police, fire departments and emergency response teams with the layout of the facility and hazardous waste handled?	✓		
7:26-9.6(f)2	Where more than one police and fire department might respond to an emergency, is there an agreement designating primary emergency authority to a specific police or fire department, and agreements with any others to provide support to the primary emergency authority?	✓		30

fire ext, fire hose, speedy dry (Safe-Step), air packs

S. Plainfield

		YES	NO	N/A
7:26-9.6(f)3	Agreements with emergency response contractors, and equipment suppliers? ATEC	✓		
7:26-9.6(f)4	Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or discharges at the facility?	✓		
7:26-9.6(f)5	Arrangements with local fire departments to inspect the facility on a regular basis with at least two (2) inspections annually?	✓		
7:26-9.7	Contingency plan and emergency procedures			
7:26-9.7(a)	Does the facility have a written contingency plan for emergency procedures designed to deal with fires, explosions, hazards to human health or environment, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil or surface water?	✓		
7:26-9.7(b)	Are provisions of the plan carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment?			✓
7:26-9.7(c)	Does the contingency plan describe the actions facility personnel shall take in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility?	✓		
7:26-9.7(d)	Did the owner or operator prepare a Spill Prevention, Control, and Countermeasures (SPCC) Plan in accordance with 40 CFR 112 or 151 or a Discharge Prevention, Containment and Countermeasure (DPCC) Plan in accordance with N.J.A.C. 7:1E-4.1 et seq.?			✓
	If yes, did the owner or operator amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this section?			✓
7:26-9.7(e)	Does the plan describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services?	✓		

		YES	NO	N/A
7:26-9.7(f)	Does the plan list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator and is this list kept up to date? Where more than one person is listed, one shall be named as primary emergency coordinator and others shall be listed in the order in which they will assume responsibility as alternates.	✓		
7:26-9.7(g)	Does the plan include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required? Is the list kept up-to-date? In addition, does the plan include the location and a physical description of each item on the list, and a brief outline of its capabilities?		✓	
7:26-9.7(h)	Does the plan include an evacuation procedure for facility personnel where there is a possibility that evaucation could be necessary? Does this plan describe signal(s) to be used to begin evacuation, evacuation routes, and alternative evaucation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires)?	✓ process of changing to hold semi-annual drill		
7:26-9.7(i)	Is a copy of the contingency plan and all revisions to the plan:			
	1. Maintained at the facility; and	✓		
	2. Has the contingency plan been submitted to local authorities (police fire departments, emergency response teams)?	✓		

TRANSPORTER INSPECTION

		YES	NO	N/A
	Does the transporter carry hazardous waste? If yes, explain.	___	___	___
7:26-7.5(c)1	Has the transporter obtained a hazardous waste collector/hauler license from the NJDEP? License #:	___	___	___
7:26-7.5(d)1	Does the transporter have an EPA identification number?	___	___	___
7:26-3.4(h)	Do the vehicle(s) have the NJSWA registration number in letters and numbers at least three (3) inches in height?	___	___	___
7:26-3.4(h)	Is the capacity of the vehicle marked on both sides of the vehicle in letters and numbers at least three (3) inches in height?	___	___	___
7:26-3.4(h)	Is the current NJSWA registration certificate in the vehicle?	___	___	___
7:26-3.2(b)	Does the license plate number and registration number on the certificate correspond to the vehicle's license plate number and the registration number displayed on the vehicle?	___	___	___
7:26-7.5(d)18	Does the transporter have in each registered vehicle a current list of all federal and state agencies to be notified in the event of a discharge of hazardous waste during transportation?	___	___	___
	How many vehicles were inspected?			
7:26-7.5(d)12	Have the drivers received any instruction or training to do with the handling of hazardous waste?	___	___	___
7:26-7.5(d)15	Is the transporter equipped with emergency equipment in conformance with subpart H of 49 CFR 393? **List equipment.**	___	___	___

		YES	NO	N/A
7:26-7.5(f)1i to iv	Has the transporter ever had an unauthorized discharge of hazardous waste during transportation?	___	___	___
	If yes, did the transporter:			
7:26-7.5(f)3i	Give notice, if required by 49 CFR 171.15 to the National Response Center?	___	___	___
7:26-7.5(f)3ii	Report in writing as required by 49 CFR 171.16 to the Director, Office of Hazardous Materials, Transportation Bureau, Department of Transportation, Washington, DC 20590?	___	___	___
7:26-7.5(f)3iii	Contact the Department at 609-292-5560 or 609-292-7172?	___	___	___

MANIFESTS

7:26-7.5(d)5	Does the transporter have a manifest form to accompany the waste shipment?	___	___	___
	Manifest document number:_____			
7:26-7.3(a)1	If the shipment originated from a site in New Jersey and is destined for another site in New Jersey, is the manifest form one supplied by the NJDEP?	___	___	___
7:26-7.3(a)2	If the shipment originated from a site in another state and is destined for a TSDF in New Jersey, is the manifest form one supplied by the NJDEP or one approved for use in New Jersey by the Department?	___	___	___
7:26-7.3(a)3	If the shipment originated from a site in New Jersey and is destined for a TSDF in another state, is the manifest form one supplied by the NJDEP or one approved for use by the Department?	___	___	___
7:26-7.5(d)11	If the hauler was unable to deliver a manifested load to the designated facility, did they contact the generator and gain further instructions from them?	___	___	___
	If yes, cite generator name and manifest number involved.			

HAZARDOUS WASTE FACILITY STANDARDS

		YES	NO	N/A
7:26-9.4(b)	Waste Analysis			
7:26-9.4(b)1i	Is there a detailed chemical and physical analysis of a representative sample of the waste(s) or each waste? (At a minimum, this analysis most contain all the information necessary for proper treatment, storage or disposal of the waste.)	___	___	___
7:26-9.4(b)1iii	Does the character of the waste handled at the facility change from day to day, week to week, etc., thus requiring frequent testing? Check only one:	___	___	___
	Waste characteristics vary ___			
	All waste(s) are basically the same ___			
	Company treats all waste(s) as hazardous ___			
7:26-9.4(b)2	Is there a written waste analysis plan at the facility?	___	___	___
	Does it contain:			
7:26-9.4(2)i	Parameters for which each hazardous waste stream will be analyzed including constituents listed in NJAC 7:26-8.16 and the rational for the selection of these parameters?	___	___	___
7:26-9.4(b)2ii	The test methods which will be used to test for these parameters?	___	___	___
7:26-9.4(b)2iii	The sampling method which will be used to obtain a representative sample of the waste to be analyzed?	___	___	___
7:26-9.4(b)2iv	The frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up-to-date?	___	___	___
7:26-9.4(b)2v	For off-site facilities, the waste analysis that hazardous waste generators have agreed to supply?	___	___	___
7:26-9.4(b)2vii	Procedures which will be used to identify changes in waste stream characteristics?	___	___	___
7:26-9.4(b)3	Did the owner or operator submit the waste analysis plan to the Department?	___	___	___
	If yes, when was the plan submitted?			

		YES	NO	N/A
	Does hazardous waste come to this facility from an outside source? (e.g., another generator)	___	___	___
	If yes, list the name(s) of generators.			
7:26-9.4(b)4	If waste comes from an outside source, are there procedures in the waste analysis plan to insure that waste received conforms to the accompanying manifest?	___	___	___
	Does the plan describe:			
7:26-9.4(b)4i	The procedures which will be used to determine the identity of each shipment of waste managed at the facility?	___	___	___
7:26-9.4(b)4ii	The sampling method which will be used to obtain a representative sample of the waste to be identified, if the identification method includes sampling?	___	___	___
7:7:26-9.4(h)	<u>Security</u>			
	Does the facility have:			
7:26-9.4(h)1i	A 24 hour surveillance system which continuously monitors and controls entry onto the active portion of the facility?	___	___	___
7:26-9.4(h)1ii	An artificial or natural barrier, which completely surrounds the active portion of the facility; and a means to control entry, at all times, through the gates or other entrances to the active portion of the facility?	___	___	___
7:26-9.4(h)3	Are there "Danger-Unauthorized Personnel Keep Out" signs posted at each entrance to the facility?	___	___	___
	If no, explain what measures are taken for security.			

		YES	NO	N/A
7:26-9.4(f)	General Inspection Requirements			
7:26-9.4(f)1	Does the owner or operator inspect the facility for malfunctions and deterioration, operator errors and discharges which may be causing, or may lead to:			
7:26-9.4(f)1i	Discharge of hazardous waste constituents to the environment?	___	___	___
7:26-9.4(f)1ii	A threat to human health?	___	___	___
7:26-9.4(f)3	Has the owner or operator developed, and does the owner or operator follow a written schedule for inspecting monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment that are utilized for the prevention, detection or response to environmental or human health?	___	___	___
7:26-9.4(f)3i	Did the owner or operator submit the written inspection schedule to the department?	___	___	___
	If yes, when was it submitted?			
7:26-9.4(f)3iii	Is the written inspection schedule kept at the facility?	___	___	___
7:26-9.4(f)3iv	Does the schedule identify the types of problems to be looked for during the inspection?	___	___	___
7:26-9.4(f)3v	Does the schedule include the frequency of inspection, based upon the rate of possible deterioration of the equipment and the probability of an environmental, or human health incident if the deterioration or malfunctions or any operator error goes undetected between inspections?	___	___	___
7:26-9.4(f)5	Is there evidence that problems reported in the inspection log have been remedied?	___	___	___
7:26-9.4(f)6	Does the owner/operator record inspections in a log?	___	___	___
	Are these records kept for at least three (3) years from the date of inspection?	___	___	___

		YES	NO	N/A
	Does the records include the date, and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial action?	___	___	___
7:26-9.4(g)	Personnel training			
	Have facility personnel successfully completed a program of classroom instruction or on-the-job training within 6 months of having been employed?	___	___	___
7:26-9.4(g)2	Is the program directed by a person trained in hazardous waste management procedures and does it include instruction which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed?	___	___	___
7:26-9.4(g)5	If yes, have facility personnel taken part in an annual review of training?	___	___	___
	Is there written documentation of the following:	___	___	___
7:26-9.4(g)6i	Job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job?	___	___	___
7:26-9.4(g)6ii	A written job description for each position related to hazardous waste management?	___	___	___
7:26-9.4(g)6iii	A written description of the type and amount of both introductory and continuing training given to personnel in jobs related to hazardous waste management?	___	___	___
7:26-9.4(g)6iv	Documentation of actual training or experience received by personnel?	___	___	___
7:26-9.4(g)7	Are training records kept on all current employees until closure of the facility and training reocrds kept on former employees for 3 years from their last date of employment?	___	___	___
7:26-9.4(g)8	Are semi-annual drills conducted involving all employees and appropriate local authorities to test emergency response capabilities at the facility in accordance with the contingency plan and emergency procedures development pursuant to NJAC 7:26-9.7?	___	___	___

		YES	NO	N/A
7:26-9.6	Preparedness and prevention			
	Does the facility comply with preparedness and prevention requirements including maintaining:			
7:26-9.6(b)1	An internal communications or alarm system?	___	___	___
7:26-9.6(b)2	A telephone or other device to summon emergency assistance from local authorities?	___	___	___
7:26-9.6(b)3	Portable fire equipment, spill control equipment, and decontamination equipment?	___	___	___
7:26-9.6(b)4	Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems?	___	___	___
7:26-9.6(c)	Is equipment tested and maintained?	___	___	___
7:26-9.6(d)1	Is there immediate access to communications or alarm systems during handling of hazardous waste?	___	___	___
7:26-9.6(e)	Adequate aisle space to allow unobstructed movement of personnel fire protection equipment, spill control equipment and decontamination equipment?	___	___	___
	If no, please explain.			
	In your opinion, do the types of waste on site require all of the above procedures, or are some not required?	___	___	___
	Explain.			
7:26-9.6(f)	Has the facility made the following arrangements, as appropriate for tye type of waste handled on site?	___	___	___
7:26-9.6(f)1	Familiarize police, fire departments and emergency response teams with the layout of the facility and hazardous waste handled?	___	___	___

		YES	NO	N/A
7:26-9.6(f)2	Where more than one police and fire department might respond to an emergency, is there an agreement designating primary emergency authority to a specific police or fire department, and agreements with any others to provide support to the primary emergency authority?	___	___	___
7:26-9.6(f)3	Agreements with emergency response contractors, and equipment suppliers?	___	___	___
7:26-9.6(f)4	Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or discharges at the facility?	___	___	___
7:26-9.6(f)5	Arrangements with local fire departments to inspect the facility on a regular basis with at least two (2) inspections annually?	___	___	___
7:26-9.7	<u>Contingency plan and emergency procedures</u>			
7:26-9.7(a)	Does the facility have a written contingency plan for emergency procedures designed to deal with fires, explosions, hazards to human health or environment, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil or surface water?	___	___	___
7?26-9.7(b)	Are provisions of the plan carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment?	___	___	___
7:26-9.7(c)	Does the contingency plan describe the actions facility personnel shall take in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility?	___	___	___
7:26-9.7(d)	Did the owner or operator prepare a Spill Prevention, Control, and Countermeasures (SPCC) Plan in accordance with 40 CFR 112 or 151 or a Discharge Prevention, Containment and Countermeasure (DPCC) Plan in accordance with N.J.A.C. 7:1E-4.1 <u>et seq</u>.?	___	___	___
	If yes, did the owner or operator amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this section?	___	___	___

7:26-9.7(e)	Does the plan describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services?	___	___	___
7:26-9.7(f)	Does the plan list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator and is this list kept up-to-date? Where more than one person is listed, one shall be named as primary emergency coordinator and others shall assume responsibility as alternates.	___	___	___
7:26-9.7(g)	Does the plan include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required? Is the list kept up-to-date? In addition, does the plan include the location and a physical description of each item on the list, and a brief outline of its capabilities?	___	___	___
7:26-9.7(h)	Does the plan include an evacuation procedure for facility personnel where there is a possibility that evacuation could be necessary? Does this plan describe signal(s) to be used to begin evacuation, evacuation routes, and alternative evacuation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires)?	___	___	___
7:26-9.7(i)	Is a copy of the contingency plan and all revisions to the plan:			
	1. Maintained at the facility; and	___	___	___
	2. Has the contingency plan been submitted to local authorities (police, fire departments, emergency response teams)?	___	___	___
7:26-9.8	<u>Closure plan</u>			
7:26-9.8(c)	Does the facility have a written closure plan?	___	___	___
	Does the owner/operator keep a written copy of the closure plan and all revisions to the plan at the facility?	___	___	___
	If yes, does the plan include:			

		YES	NO	N/A
7:26-9.8(e)1i	A description of how and when the facility will be partially closed (if applicable) and ultimately closed?	___	___	___
7:26-9.8(e)1ii	The maximum extent of the operation which will be open during the life of the facility?	___	___	___
7:26-9.8(e)2	An estimate of the maximum inventory of wastes in storage or in treatment at any given time during the life of the facility?	___	___	___
7:26-9.8(e)3	A description of the steps needed to decontaminate facility equipment during closure?	___	___	___
7:26-9.8(e)4	A schedule for final closure including the anticipated date when the wastes will no longer be received, the date when completion of final closure is anticipated, and intervening milestone dates which will allow tracking of the progress of closure?	___	___	___
	Post Closure Plan			
7:26-9.9(g)	Does the facility have a written post-closure plan kept at the facility?	___	___	___
	If yes, does the plan:			
7:26-9.9(i)	Identify the activities which will be carried on after closure and the frequency of these activities?	___	___	___
7:26-9.9(i)1	Include a description of the planned groundwater monitoring activities and frequencies at which they will be performed?	___	___	___
7:26-9.9(i)2	Include a description of the planned maintenance activities, and frequency at which they will be performed, to insure the following:	___	___	___
7:26-9.9(i)2i	The integrity of the cap and final cover or other containment structures where applicable?	___	___	___
7:26-9.9(i)2ii	Describe the function of the facility monitoring equipment?	___	___	___
7:26-9.9(i)3	Include the name, address and phone number of a person or office to contact about the disposal facility during the post-closure period?	___	___	___
	Does the owner/operator have a written estimate of the cost of post-closure for the facility?	___	___	___
	If yes, what is it?			

Please circle all appropriate activities and answer questions on indicated pages for all activities circled.

Storage	Treatment	Disposal
Container - pg. 9	Tank - pg. 12	Landfill - pg. 18
Tank, above ground - pg. 12	Surface Impoundments - pg. 15	
Tank, below ground - pg. 12	Incineration - pg. 20	Surface Impoundments - pg. 15
Surface Impoundments - pg. 15	Thermal Treatment - pg. 23	Other_____
Waste Piles - pg. 17		
Other_____	Chemical, Physical and Biological Treatment - pg. 25	
	Other_____	

		YES	NO	N/A
7:26-9.4(d)	Containers What type of containers are used for storage? Describe the size, type, quantity and nature of wastes (e.g., 12 fifty-five gallon drums of waste acetone)			
7:26-10.4(b)	Is there a containment system for spills, leaks and precipitation? Is yes, describe the containment system.	___	___	___
7:26-9.4(d)1i	Do the containers appear to be of sturdy leak-proof construction of adequate wall thickness, weld, hinge and seam strength, and of sufficient material strength to withstand side and bottom shock, while filled, without impairment of the container's ability to contain hazardous waste? If no, explain.	___	___	___

		YES	NO	N/A
7:26-9.4(d)1ii	Are the lids, caps, hinges or other closure devices of sufficient strength that when closed, they will withstand dropping, overturning or other shock without impairment of the container's ability to contain hazardous waste?	___	___	___
	If no, explain.			
7:26-9.4(d)2	Do the containers appear to be in good condition, not in danger of leaking?	___	___	___
7:26-9.4(d)2	If not, please describe the type, condition and number of leaking or corroded containers. Be detailed and specific.			
7:26-9.4(d)4i	Are all containers securely closed, except those in use, so that there is no escape of hazardous waste or its vapors?	___	___	___
	If no, explain.			
7:26-9.4(d)4iii	Do containers appear to be properly opened, handled or stored in a manner which will minimize the risk of the container rupturing or leaking?	___	___	___
	If no, explain.			
7:26-9.4(d)iv	Are containerized hazardous wastes segregated in storage by waste type?	___	___	___
7:26-9.4(d)v	Are containerized hazardous wastes arranged so that their identification label is visible?	___	___	___
7:26-9.4(d)3	Are hazardous wastes stored in containers made of compatible materials?	___	___	___

		YES	NO	N/A
7:26-9.4(d)5	Does the owner/operator inspect the container storage area at least daily, looking for leaks and for deterioration caused by corrosion or other factors?	___	___	___
7:26-9.4(d)6	Are containers holding ignitable and reactive waste located at least 50 feet (15 meters) away from the facility's property line?	___	___	___
7:26-9.4(d)7i	Are incompatible wastes, or incompatible wastes and materials placed in the same container?	___	___	___
	If yes, explain.			
7:26-9.4(d)7ii	Are hazardous wastes placed in unwashed containers that previously held incompatible wastes?	___	___	___
	If yes, explain.			
7:26-9.4(d)7iii	Are containers holding hazardous waste that are incompatible with any waste or other materials stored nearby in other containers, open tanks, or surface impoundments separated from the other materials or protected from them by means of a dike, berm, wall or other device?	___	___	___
7:26-9.4(e)1i	Are ignitable, reactive or incompatible wastes protected from sources of ignition or reaction?	___	___	___
	If no, explain.			
7:26-9.4(e)1ii	Does the owner/operator confine smoking and open flames to specially designated locations when ignitable or reactive wastes are being handled?	___	___	___
	If no, explain.			

		YES	NO	N/A
7:26-9.4(e)1iii	Does the owner/operator conspicuously place "No Smoking" signs whenever there is a hazard from ignitable or reactive waste?	___	___	___
	If the treatment, storage or disposal of ignitable or reactive waste, and the mixture of incompatible wastes and materials, conducted so that it does not:			
7:26-9.4(e)2i	Generate extreme heat or pressure, fire or explosion, or violent reaction?	___	___	___
7:26-9.4(e)2ii	Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health?	___	___	___
7:26-9.4(e)2iii	Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk or fire or explosion?	___	___	___
7:26-9.4(e)2iv	Damage the structural integrity of the device or facility containing the waste?	___	___	___
7:26-9.4(e)2v	Threaten human health or the environment?	___	___	___
7:26-11.2	Tanks			
	What are the approximate number and size of tanks containing hazardous waste?			
	Identify the waste treated/stored in each tank.			
	General Operating Requirements			
7:26-11.2(a)2	Are hazardous wastes or treatment reagents placed in the tank that could cause the tank or its inner liner to rupture, leak or corrode?	___	___	___
	If yes, please explain.			
	Are there leaking tanks?	___	___	___

		YES	NO	N/A
7:26-11.2(a)2	Are all hazardous wastes or treatment reagents being placed in tanks compatible with the tank material so that there is no danger or ruptures, corrosion, leaks or other failures?	___	___	___
7:26-11.2(3)	Do uncovered tanks have at least 2 feet of freeboard or an adequate containment structure?	___	___	___
7:26-11.2(a)4	If waste is continuously fed into a tank, is the tank equipped with a means to stop the inflow from the tank, e.g., bypass system to a standby tank?	___	___	___
7:26-11.2(c)	Inspections			
	Is the tank(s) inspected for:			
	1. Discharge control equipment (each operating day)	___	___	___
	2. Monitoring equipment (each operating day)	___	___	___
	3. Level of waste in tank (each operating day)	___	___	___
	4. Construction of materials of the tank (weekly)	___	___	___
	5. Are the tanks and surrounding areas (e.g., dike) inspected weekly for leaks, corrosion or other failures (weekly)?	___	___	___
7:26-9.2(b)	Are there underground tanks used to store hazardous waste?	___	___	___
	If yes, how many and can they be entered for inspection?	___	___	___
	Has the underground tank been in use on or before November 19, 1980? Specify date.	___	___	___
	If no, when was the tank placed in use?			
7:26-11.2(e)	Are ignitable or reactive wastes stored in a manner which protects them from a source of ignition or reaction?	___	___	___
	If no, please explain.			

		YES	NO	N/A
7:26-11.2(f)	Does it appear that incompatible wastes are being stored separate from each other?	___	___	___
7:26-9.2(b)3i	Does the facility have a groundwater monitoring plan approved by the Department?	___	___	___
7:26-9.2(b)3ii	Is the use of the tank specified to the manufacturers recommended lifetime?	___	___	___
7:26-10.5(e)6	Are the underground tanks subjected to periodic integrity testing?	___	___	___

		YES	NO	N/A
7:14A-6	Groundwater monitoring			
	(Applies only to: surface impoundments, landfills, land disposal facilities)			
7:14A-6.2	Does the owner/operator have a groundwater monitoring plan approved by the Department and capable of determining the facility's impact on the quality of groundwater?	___	___	___
	If no, please explain.			
	How many monitoring wells has the facility installed?			
	What is the depth to groundwater?			
	How many deep monitoring wells are onsite? (Indicate depth of monitoring wells)			
	How many shallow monitoring wells are onsite? (Indicate depth of monitoring wells)			
7:14A-6.3(a)	Is the groundwater monitoring system capable of yielding groundwater samples for analysis?	___	___	___
	If no, please explain.			
7:14A-6.3(a)1	Are monitoring wells installed hydraulically upgradient?	___	___	___
	If yes, specify how many and the depth of each.			

		YES	NO	N/A
7:14A-6.3(a)2	How many monitoring wells are installed hydraulically down gradient?	___	___	___
	If yes, specify how many and the depth of each.			
7:14A-6.4(a)	Does the owner/operator have a groundwater sampling and analysis plan?	___	___	___
	If no, please explain.			
7:14A-6.4(a)	Does the plan include procedures and techniques for:			
	1. Sample collection	___	___	___
	2. Sample preservation and shipment	___	___	___
	3. Analytical procedures	___	___	___
	4. Chain of custody	___	___	___
7:26-11.3	Surface Impoundments			
	Describe the design and operating features of the surface impoundment to prevent groundwater contamination (e.g., liner leachate collection system).			
	Give the approximate size of surface impoundments (gallons or cubic feet). Please specify the types of waste stored and treated.			
7:26-11.3(a)	Is there at least 2 feet of freeboard in the impoundment?	___	___	___

		YES	NO	N/A
7:26-11.3(b)	Do all earthen dikes have a protective cover to preserve their structural integrity?	___	___	___
	If yes, please specify the type of covering.			
7:26-9.4(b)1	Does the owner/operator have a detailed chemical and physical analysis of a representative sample of the waste in the impoundment?	___	___	___
7:26-9.4(c)2	Does the owner/operator place the results from each waste analysis and trial test, or the documented information, in the operating record of the facility?	___	___	___
7:26-11.3(d)	Does the owner or operator inspect:			
7:26-11.3(d)1	The freeboard level at least once each operating day to ensure compliance with subsection 11.3(a)?	___	___	___
7:26-11.3(d)2	The surface impoundment, including dikes and vegetation surrounding the dike, at least once a week to detect any leaks, deterioration or failures in the impoundment?	___	___	___
7:26-11.3(f)	Is ignitable or reactive waste placed in the surface impoundment?	___	___	___
7:26-11.3(f)1	If yes, is the waste treated, rendered, or mixed before or immediately after placement in the impoundment?	___	___	___
7:26-11.3(f)1i	Does the resulting waste, mixture, or dissolution of material no longer meet the definition of ignitable or reactive waste?	___	___	___
7:26-11.3(f)1ii	Is the waste treated, rendered or mixed so that it does not:			
7:26-9.4(e)2i	Generate extreme heat or pressure, fire or explosion, or violent reaction?	___	___	___
7:26-9.4(e)2ii	Produce uncontrolled toxic mists, fumes, dusts, of gases in sufficient quantities to threaten human health?	___	___	___
7:26-9.4(e)2iii	Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosion?	___	___	___

		YES	NO	N/A
7:26-9.4(e)2iv	Damage the structural integrity of the device or facility containing the waste?	___	___	___
7:26-9.4(e)2v	Threaten human health or the environment?	___	___	___
7:26-11.3(f)2	Is the surface impoundment used soley for emergencies?	___	___	___
7:26-11.3(g)	Are incompatible wastes, or incompatible wastes and materials placed in the same surface impoundment?	___	___	___
	If yes, is the waste managed so that it does not:			
7:26-9.4(e)2i	Generate extreme heat or pressure, fire or explosion, or violent reaction?	___	___	___
7:26-9.4(e)2ii	Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health?	___	___	___
7:26-9.4(e)2iii	Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk or fire or explosion?	___	___	___
7:26-9.4(e)2iv	Damage the structural integrity of the device or facility containing the waste?	___	___	___
7:26-9.4(e)2v	Threaten human health or the environment?	___	___	___
	Waste Piles			
	How many waste piles are on-site and approximately how large are they? (Please indicate size and height and types of wastes in piles.)			
	Is the waste pile protected from wind erosion?	___	___	___
	a) Does it appear to need such protection?	___	___	___
	b) Explain what type of protection does exist.			
7:26-9.3(a)5i	Is the waste pile larger than 200 cubic yards?	___	___	___

		YES	NO	N/A
7:26-9.3(a)5ii	Is the pile placed on an impermeable base that is compatible with the waste?	___	___	___
	If no, explain.			
7:26-9.3(a)5iii	Is run-on diverted away from the pile?	___	___	___
7:26-9.3(a)5iv	Is leachate and run-off from the pile collected and managed as a hazardous waste?	___	___	___
7:26-11.4	Landfills			
	Identify the types of waste and size of the landfill.			
	General Operating Requirements			
7:26-11.4(a)1	Is run-on diverted away from all portions of the landfill?	___	___	___
7:26-11.4(a)2	Is run-off from active portions of the landfill collected?	___	___	___
7:26-11.4(a)3	Is waste which is subject to wind dispersal controlled?	___	___	___
	Please explain how.			
7:26-11.4(a)4	Does waste disposal or the disposal operation occur within 200 feet (60.6 meters) of the property boundary?	___	___	___
7:26-11.4(a)6	Are untreated, ignitable, or reactive wastes placed in the landfill?	___	___	___
	If yes, explain.			

		YES	NO	N/A
7:26-11.4(a)7	Are incompatible wastes, or incompatible wastes and materials placed in the same hazardous waste landfill cell?	___	___	___
	If yes, explain.			
7:26-11.4(a)8	Are bulk or non-containerized liquid waste or waste containing free liquids placed in a hazardous waste landfill?	___	___	___
	If yes:			
7:26-11.4(a)8i	Does the hazardous waste landfill have a liner which is chemically and physically resistant to the added liquid and a functioning leachate collection and removal system with a capacity sufficient to remove all leachate produced?	___	___	___
7:26-11.4(a)8ii	Before disposal, is the liquid waste or waste containing free liquids treated or stabilized, chemically or physically, so that free liquids are no longer present?	___	___	___
7:26-11.4(a)9	Are containers holding liquid waste or waste containing free liquids placed in a hazardous waste landfill?	___	___	___
	If yes:			
7:26-11.4(a)9i	Is the container designed to hold liquids or free liquids for a use other than storage, such as a battery?	___	___	___
7:26-11.4(a)9ii	Is the container very small, such as an ampule?	___	___	___
7:26-11.4(a)10	Are empty containers crushed flat, shredded, or similarly reduced in volume before it is buried beneath the surface of a hazardous waste landfill?	___	___	___
7:26-11.4(a)11	Does the owner or operator of a hazardous waste landfill continue to dispose of hazardous wastes subsequent to the detection of any liquid, in the secondary collection system?	___	___	___
7:26-11.4(b)	Does the owner or operator of a hazardous waste landfill maintain an operating record required in N.J.A.C. 7:26-9.4(i)?	___	___	___

		YES	NO	N/A
7:26-11.4(b)1	Does the owner/operator maintain a map, the exact location and dimensions, including depth of each cell with respect to permanently surveyed bench marks?	___	___	___
7:26-11.4(b)2	The contents of each cell and the appropriate location of each hazardous waste type within each cell?	___	___	___
	Are containers holding liquid waste or waste containing free liquids placed in the landfill?	___	___	___
	Please describe the types and contents of such containers placed in the landfill.			
	Are empty containers placed in the landfill crushed flat, shredded or similarly reduced in volume before they are buried?	___	___	___
	Are small containers of hazardous waste in overpacked drums placed in the landfill?	___	___	___
	If yes, please describe precautions taken to prevent the release of the waste.			
7:26-11.5	Incinerator			
	What type of incinerator is at the site (e.g., waterwall incinerator, boiler, fluidized bed, etc.)			
	List the types and quantities of hazardous waste incinerated.			

		YES	NO	N/A
	Is the residue from the incinerator a hazardous waste?	___	___	___
	What types of air pollution control devices (if any) are installed in the incinerator unit?			
	Is energy recovered from the process?	___	___	___
	If yes, describe.			
	What is the destruction and removal efficiency for the organic hazardous waste constituents?			
7:26-11.5(b)1	Does the operating record include additional analysis and to determine types of pollutants which might be emitted including:			
7:26-11.5(b)1i	Heating value of the waste?	___	___	___
7:26-11.5(b)1ii	Halogen and sulfur content?	___	___	___
7:26-11.5(b)1iii	Concentrations of lead and mercury?	___	___	___
7:26-11.5(2)	If no to any of the above questions, is there justification and documentation?	___	___	___
	If operating, does it appear the incinerator is operating at steady state for conditions of operation, including temperature and air flow?	___	___	___
	<u>Monitoring and Inspection</u>			
7:26-11.5(c)1	Are existing instruments relating to combustion and emission controls monitored every 15 minutes?	___	___	___
	If no, explain.			

		YES	NO	N/A
7:26-11.5(c)1	Does the incinerator have all the following instruments for measuring: wastefeed, auxiliary fuel feed air flow, incinerator temperature scrubber flow, and scrubber pH? (Circle missing instruments.)	___	___	___
	If no, explain.			
7:26-11.5(c)2	Is the stack plume observed visually at least hourly for opacity and color?	___	___	___
7:26-11.5(c)3	Are there any signs of leaks, spill and fugitive emission associated with the pumps, valves, conveyors, pipes, etc?	___	___	___
	If yes, describe.			
7:26-11.5(c)3	Are all emergency shutdown controls and system alarms checked to assure proper operation?	___	___	___
	Is there any reason to believe the incinerator is being operated improperly? i.e., steady state conditions are not maintained.	___	___	___
	If yes, explain.			
7:26-11.5(c)3	Is the incinerator inspected daily?	___	___	___
7:26-11.5(e)	Is there open burning of hazardous waste?	___	___	___
	If yes, what is being burned? (Only burning or detonation of explosives is permitted.)			
	If open burning or detonation of explosives is taking place, approximately what is the distance from the open burning or detonation to the property of others?			

	YES	NO	N/A
Are containers holding liquid waste or waste containing free liquids placed in the landfill?	___	___	___
Please describe the types and contents of such containers placed in the landfill.			
Are empty containers placed in the landfill crushed flat, shredded or similarly reduced in volume before they are buried?	___	___	___
Are small containers of hazardous waste in overpacked drums placed in the landfill?	___	___	___
If yes, please describe precautions taken to prevent the release of the waste.			

7:26-11.6 Thermal Treatment

	YES	NO	N/A
What type of thermal treatment is at the site (e.g., waterwall incinerator, boiler, fluidized bed, etc.)			
List the types and quantities of hazardous waste thermally treated.			
Is the residue from the thermal treatment unit a hazardous waste?	___	___	___
What types of air pollution control devices (if any) are installed in the thermal treatment unit?			

		YES	NO	N/A
	Is energy recovered from the process?	___	___	___
	If yes, describe.			
	What is the destruction and removal efficiency for the organic hazardous waste constituents?			
7:26-11.6(b)1	Does the operating record include additional analysis and to determine types of pollutants which might be emitted including:			
7:26-11.6(b)1i	Heating value of the waste?	___	___	___
7:26-11.6(b)1ii	Halogen and sulfur content?	___	___	___
7:26-11.6(b)1iii	Concentrations of lead and mercury?	___	___	___
7:26-11.6(2)	If no to any of the above questions, is there justification and documentation?	___	___	___
	If operating, does it appear the thermal treatment unit is operating at steady state for conditions of operation, including temperature and air flow?	___	___	___
	<u>Monitoring and Inspection</u>			
	Are existing instruments relating to combustion and emission controls monitored every 15 minutes?	___	___	___
	If no, explain.			
7:26-11.6(c)1	Does the thermal treatment have all the following instruments for measuring: wastefeed, auxiliary fuel feed air flow, incinerator temperature scrubber flow, and scrubber pH? (Circle missing instruments.)	___	___	___
	If no, explain.			

		YES	NO	N/A
7:26-11.6(c)2	Is the stack plume observed visually at least hourly for opacity and color?	___	___	___
7:26-11.6(c)3	Are there any signs of leaks, spill and fugitive emission associated with the pumps, valves, conveyors, pipes, etc?	___	___	___
	If yes, describe.			
7:26-11.6(c)3	Are all emergency shutdown controls and system alarms checked to assure proper operation?	___	___	___
	Is there any reason to believe the thermal treatment unit is being operated improperly? i.e., steady state conditions are not maintained.	___	___	___
	If yes, explain.			
7:26-11.6(c)3	Is the thermal treatment inspected daily?	___	___	___
7:26-11.6(e)	Is there open burning of hazardous waste?	___	___	___
	If yes, what is being burned? (Only burning or detonation of explosives is permitted.)			
	If open burning or detonation of explosives is taking place, approximately what is the distance from the open burning or detonation to the property of others?			
7:26-11.7	<u>Chemical, Physical and Biological Treatment</u>			
	(Other than in tanks, surface impoundments or plant treatment facilities)			

		YES	NO	N/A
	Describe the treatment system at this facility and the types of wastes treated.			
7:26-11.7(a)2	Does the treatment process system show any signs of ruptures, leaks or corrosion?	___	___	___
	If yes, describe.			
7:26-11.7(a)3	Is there a means to stop the inflow of continuously-fed hazardous wastes?	___	___	___
	Inspections			
7:26-11.7(c)1	Is the discharge control safety equipment (e.g., waste feed cut-off systems, by-pass systems, drainage systems and pressure relief systems) in good working order?	___	___	___
7:26-11.7(c)1	Are they inspected at least once each operation day?	___	___	___
7:26-11.7(c)2	Does the data gathered from the monitoring equipment (e.g., pressure and temperature gauges) show treatment process is operating according to design?	___	___	___
7:26-11.7(c)2	Is data gathered at least once each operating day?	___	___	___
7:26-11.7(c)3	Are construction materials of the treatment process inspected at least weekly to detect corrosion or leaking of fixtures and seams?	___	___	___
7:26-11.7(c)4	Are the discharge confinement structures (e.g., dikes) immediately surrounding the treatment unit inspected at least weekly to detect erosion or obvious signs of leakage (e.g., wet spots or dead vegetation).	___	___	___
7:26-11.7(e)1	Are ignitable or reactive waste fed into the waste treatment system treated or protected from any material or conditions which may cause it to ignite or react?	___	___	___
	If yes, explain how.			

		YES	NO	N/A
7:26-11.7(f,	Are the incompatible wastes placed in the same treatment process?			✓
	If yes, please explain.			

Industrial Site Evaluation Element
Bureau of Environmental Evaluation and
Cleanup Responsibility Assessment

Report of Inspection

ECRA Case # 86108 Date of Inspection: 5/29/91 10:00 AM - 11:30

Inspection Type: Preliminary ____ Interim ✓ Final ____ Other ____

Inspector: John Kosher

Industrial Establishment: Metz Metallurgical Corp.

Location: 3900 S. Clinton Ave., S. Plainfield Boro, Middlesex County

Individuals Involved: Paul Dahlgren - agent
Scott Eves - New operator (Deposed), Peter Metz - operator

NARRATIVE DESCRIPTION: ☑ I arrived at site to conduct an Introductory inspection. Metz produces precious metal powders at this location. Ownership exchanged under an ACO operations continued in same manner after sale. Weather conditions were sunny, hot & humid. Numerous areas of concern are being addressed in this clean up, some areas are complete, only awaiting soil disposal, others had not been started.

☑ Suspected Asbestos insulation on overhead pipes was observed along with foam, celulose & fiberglas insulation. No severely friable sections of insulation were observed & Metz plans to have an Industrial Hygienist do a survey of the insulation within 2 weeks.

☑ Samples were taken along the perimeter of the property for Ag & Cd. Samples (PS1-6) were completed, Samples PS 7-10 will not be completed until Area E soil removal & delineation are complete.

☐ Area E is a Swale, Metz has a NJPDES permit for the (over)

Inspector's Signature: [signature]

Prelim — only if not started remediation
Interim — start not done
Final — complete work

(cont) discharge of non-contact cooling water. Several accidental spills of silver solutions resulted in the sediment being contam. with silver. Some excavation has already occurred, additional delineation & soil removal is required

☒ Area A is an old drums storage area & loading dock. PHC & silver contam. were found & removed. This area has been completely remediated.

☒ Area AWT was an old storage location for machinery & Trucks. Drippings contaminated exposed soils. The area was dug up to put in a foundation for a new building. The stockpiled soils were found to be contaminated by PHCs & BNs. Soil was drummed. This area was considered to be completely remediated.

Soil was observed stockpiled on plastic & in drums awaiting disposal. Soil was covered, It was stored on an asphalt parking area. The area was surrounded by bails of hay to minimize runoff.

A retension basin had been excavated to receive the cooling water prior to discharge to the swail. This is to serve as a safety valve against future accidental spills.

Form DEP-001
2/83

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

REPORT OF: ☒ PHONE CALL ☐ VISIT

DATE 6/13/91

TIME 3:10

REFERRED TO

BUREAU OR OFFICE

FILE

PERSON CONTACTED Peter Metz

PHONE NO.

AFFILIATION/ADDRESS Metz Metallurgical

SUBJECT OF CALL/VISIT

SUMMARY OF CALL/VISIT Spill of Acid observed during site 5/29 inspection - held in retention basin - Flushed with H2O pumped into liquid carrier trucks and disposed.

→ was to not disposed, was trucked to front → put into waste water treatment system to be neutralized.

OK → require you to call spill Hotline & NJPDES to inform them of discharge to basin even if no containment reached outside area.

ACTION RECOMMENDED

[signature]
Signature

65

X

Industrial Site Evaluation Element
Bureau of Environmental Evaluation and
Cleanup Responsibility Assessment

Report of Inspection

ECRA Case # 86108 Date of Inspection: 9-29-92

Inspection Type: Preliminary ____ Interim ____ Final ✓ Other ____

Inspector: John Koster

Industrial Establishment: Metz Metallurgical Corp.

Location: 3900 S. Clinton Ave., S. Plainfield Boro, Middlesex Co.

Individuals Involved: Dawn DeBiasse - CH2M Hill
Scott Eves - Degussa (new operator)

NARRATIVE DESCRIPTION: I arrived @ site to perform final inspection at 1:00 PM. Weather conditions were sunny, windy cool temp 60°F. All work required in CPA letter had been completed. G. Water was not impacted, Degussa is on a voluntary 6 month monitoring program so well done need to be abandoned. The specific soils areas are listed below.

Area A - drum storage area, contam. BNs & PNCs and metals - area exc. post exc sampling acceptable - area was paved. - NFA

Area AWT - inside Area A, process water waste treatment facility erected on it - NFA

Area B - site driveway along loading area, cont - metals - borings thru asphalt - NFA

Area C - between bldg A & B - equip was stored on soil, surface cont metals & PNCs - exc. & regraded & paved NFA

Area D - rear yard behind Bldg A - surface PNC & metal - exc & post exc sampling NFA

Area E - NJPDES outfall swail - metals exc. along 800' included offsite w/ post exc. sampling - NFA

Area F - north bldg B - post WST - soil exc. & post exc. repaved NFA

Area G - between bldg A-C (cov't yard) drum storage - exposed soils - surface exc. & paved w/ post exc sampling NFA

Inspector's Signature: [signature]

66

over

perimeter - prop. perimeter sampled for run-off of Metals - cont area exc.
pool exc + confirmed NFA. areas resurfaced.

waste pile - exc. soil on asphalt all has since been removed
(disposed or re-used) area was parking Lot. NFD

Asbestos - inside bldg. on piping - some amount ≈ 10-20 linear feet
encapsulated w/ polymer resin - did not appear
friable or frayed. NFA acceptable after [illegible] remain

soil above most restrictive residential levels of CLS were reused
in many areas of site. Operations are continuing - new operators
consent in file. NFA this ECRA

As listed above all AEC's listed in CPA have been satisfactorily addressed.
I departed site @ 2:30 PM.

F DEG.1

NJD002195303

Inspection of Degussa Corporation

On April 16, 1992, John Wilk (2AWM-HWC) conducted an inspection at Degussa Corporation located at 3900 South Clinton Avenue, South Plainfield, NJ. The purpose of the inspection was to determine if the facility was eligible for the BIF precious metals recovery exemption under 40 CFR § 266.100 (f) and, if so, was complying with the reduced operating requirements pursuant to that section.

The BIF precious metals recovery exemption, a technical amendment which will appear in the 1992 CFR at 40 CFR § 266.100(f), allows facilities that reclaim precious metals from hazardous waste, using furnaces, to operate without complying with the strict BIF permitting and emission standards providing it complies with the following:

(1) The facility provides a one-time written notice to EPA indicating the following:

(i) The facility claims the exemption;

(ii) The hazardous waste is burned for legitimate recovery of precious metals; and

(iii) The facility complies with sampling and analysis and recordkeeping requirements.

(2) The facility samples and analyzes the hazardous waste to support the above claims.

(3) The facility maintains records for three years.

Facility Description and Operations:

Degussa is a manufacturer of precious metals wire, powders and flakes. The products are primarily used by the electronics, chemical manufacturing and jewelry making industries.

Although Degussa purchases pure metals (e.g., gold, paladium, platinum, silver, etc.) as raw materials it also purchases precious metals bearing recyclable wastes which it reclaims on-site.

The reclamation process consists of the following:

1) Precious metals bearing hazardous wastes are placed in trays and placed into a gas fueled furnace. A temperature of approximately 1800 degrees Fahrenheit is achieved. The organic fraction of the waste is destroyed leaving behind a mixture of ash and metals.

2) The residue is poured from the trays and mixed with acid (usually hydrochloric and nitric.)

3) The acid mixture is filtered separating the ash from the dissolved metals. The acid filtrate solution contains the metals.

4) Salt (sodium chloride) is added to the filtrate which causes the metals to precipitate out of solution as a metallic chloride. The metallic chloride is filtered and the filtrate is passed to the on-site wastewater treatment system prior to disposal through the municipal sewer.

5) The filterable solids (e.g., the metallic chloride) is mixed with sodium hydroxide and formaldehyde. Pure metal precipitates as sodium chloride and formic acid form from the sodium hydroxide and formaldehyde and the freed chloride ion from the reclaimable metal.

6) The precipitated metal is filtered and melted into bars or ingots.

During the inspection Degussa claimed that the only hazardous waste it reclaims is a spent organic silver catalyst (D011) but that it has not reclaimed a load after August 21, 1991. It anticipates that it will reclaim another load in the near future depending upon the production rate of the spent catalyst by the generator. The waste is purchased from the generator.

On August 21, 1991, Degussa provided EPA a one-time written notice that it claims the metals recoverers exemption under 40 CFR § 266.100 (f).

Conclusion and Recommendations:

The January 4, 1985 Federal Register (50 FR at 648) discussed some of the indications of legitimate precious metal recovery operations. These include the presence of economically significant amounts of precious metals in the hazardous waste, efficient recovery operations, no land disposal of wastes destined for recovery, and payment by the reclaimer to the waste generator. These requirements appear to have been met by the facility.

No further enforcement action is recommended.

Degussa

Degussa
Corporation

Hand delivered 8/21/91

CC-Joel/A. Bellman
orig to PAB

RECEIVED
AUG 26 1991

Administrator
U.S.E.P.A. Region 2
Room 900
26 Federal Plaza
New York, NY 10278

August 21, 1991

EPA ID # NJD002195303

VIA MESSENGER

To Whom It May Concern,

This letter is providing the one-time written notice required under 40 CFR 266.100(f).

1. Degussa Corporation located at 3900 South Clinton Avenue, South Plainfield, Middlesex County, New Jersey is claiming exemption from the Regulation of the Burning of Hazardous Waste in Boilers and Industrial Furnaces.
2. Any hazardous waste burned at this facility will be burned for the legitimate recovery of precious metals.
3. This facility will comply with the sampling and analysis and recordkeeping requirements.

Cordially,

C. Scott Eves

C. Scott Eves
Environmental Control Manager
Metal Group
Degussa Corporation

INSPECTION SUMMARY REPORT
DEGUSSA CORPORATION - METZ DIVISION

Project Number:	R02029
Project Name:	Non-Notifier Enforcement
Facility Name:	Degussa Corporation - Metz Division
Facility ID #:	NJD002195303
Facility Address:	3900 South Clinton Avenue South Plainfield, NJ 07080 Middlesex County
Facility Telephone No.:	(908) 561-1100
Inspector(s):	Alexis Vitone
Date of Inspection:	4/30/92
Arrival/Departure:	8:50 am/3:30 pm
Individual(s) Accompanying Inspection Team:	James Leahey, Permits Administration Manager

Regulatory Concerns:

- NJAC 7:26-9.6(e)
  Insufficient aisle space between drums so as to allow unobstructed movement of personnel or equipment in an emergency.

- 40 CFR 262.50, Subpart E - Exports of Hazardous Waste
  Facility may be exporting hazardous waste to Germany without proper notification and record keeping. (Ash from incinerator shipped to Germany for reclamation of precious metals.)

- 40 CFR 230.41 Wetlands/NJAC 7:7A-9
  Possible disruption of wetlands without approval or permit. (No information or permit provided regarding activities on or near wetlands).

Exterior Observations:

- Weather - sunny to cloudy, low 50's; light winds.
- Facility is totally fenced in; security cameras in place on roofs of buildings.
- Storm drains located on South Clinton Avenue.
- Small areas of wetlands observed behind facility.
- Area is predominantly industrial.
- A total of three buildings onsite.

Operations and Processes:

Degussa - Metz Division is a precious metals manufacturer. They accept wastewaters which contain precious metals, as well as scrap metals (silver, etc.), and essentially reclaim all precious metals from these wastes.

Degussa has been in operation since the late 1960's. There are a total of 310 employees at the facility. There is one 12-hour manufacturing shift and a 24-hour security system in place.

Wastes generated onsite consist of D001, D002, D003, D006, D007, D008, D009, D011, D018, U151, U169, and spent solvents (F001, F003, F005). The heavy metals are generated from the precious metals recovery while the solvents are generated from degreasing and cleaning operations.

The facility has an incinerator onsite for floor sweepings, a water treatment plant for process waters, and a catch basin onsite for non-contact cooling waters.

The ash from the incinerator is shipped to Germany for further precious metals reclamation, according to onsite personnel. The facility was unable to provide documentation such as manifests, EPA notification letters, etc., for the ash.

The sludge from the wastewater treatment plant is manifested off the site as a hazardous waste to an authorized TSD facility. The wastewater from the plant is disposed of in accordance with their NJPDES permit.

Wastes On Site:

- Five 55-gallon drums of D011
- Two 55-gallon drums of F001
- One 55-gallon drum of X726
- Four 55-gallon drums of D006, D011
- Eleven 3'x 3'x 3' double-lined DOT approved bags of D006, D011 (filter cake from wastewater treatment plant).

Drums and 3'x 3'x 3' bags appeared to be in compliance with all applicable requirements (markings, container requirements, labelling, etc). However, insufficient aisle space was observed in the drum storage area.

Drum storage area is located in the same area as the wastewater treatment plant and is bermed and enclosed from the elements (rain, wind, sun, etc).

Storage Areas Include:

- One hazardous waste drum storage area - actively in use (Facility used to have other areas throughout the facility for hazardous waste storage; however, they have eliminated them and only use one central area at this time).

- No satellite hazardous waste drum areas observed during the inspection.

Photographs:

- Two taken of the hazardous waste storage area:

    1. Depicts minor staining on ground.
    2. Depicts less than 18" aisle space between drums.

Documents Reviewed:

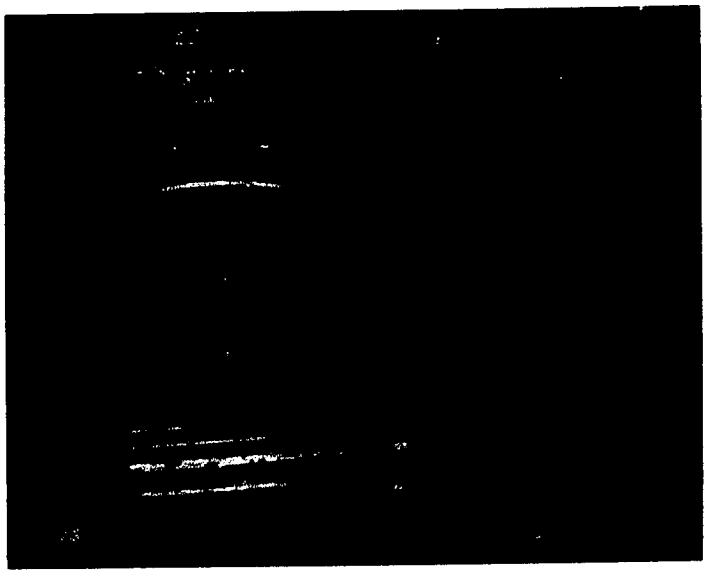
- Permits for air control equipment
- Permits for water control equipment
- Permits for discharges to sewer system and tributary
- Manifests for 1990, 1991, and 1992
- Annual Report, 1991 NJDEPE
- Community Right to Know forms
- Toxic Chemical Release Inventory-SARA Title 313, for 1990 (still in effect)
- Department of Environmental Quality-114 (New Jersey State Right To Know)
- LDR notification forms for 1990, 1991, and 1992
- Site Sketch

Documents Copied:

- Random manifests copied for information of purposes
- Annual Report, 1991 NJDEPE
- Community Right to Know forms
- Toxic Chemical Release Inventory-SARA Title 313, for 1990 (still in effect)
- DEQ-114: Release and source reduction forms for 1990 (still in effect)
- LDR notification forms for 1990, 1991, and 1992
- Site Sketch

Other:

At the time of my inspection, Mr. Scott Eves was not onsite. Mr. Eves is the Environmental Coordinator for Degussa. Regardless, the inspection was conducted. However, Mr. Leahey was not able to answer all questions asked. For example, no information regarding wetlands and construction activities was available. Information regarding monitoring wells was also unavailable. Mr. Leahey was informed during the inspection that the materials not available during the inspection are to be forwarded as soon as possible to Alliance's office. To date, they have not been received; therefore, the issue of wetlands will be assumed to be a potential violation for the purposes of the report.



DEGUSSA CORPORATION - METZ DIVISION (1)
NJD002195303
— So. Plainfield
Drum storage area — although not visible from this picture - drums are [illegible] - however floor [illegible] some [illegible] stains visible

DEGUSSA CORP - METZ DIVISION NJD002195303 - Plainfield
Drum storage area — less than 18" between N.T.
(2) [illegible] - NOT full Drums [illegible]
[illegible] yellow [illegible]

DIVISION OF HAZARDOUS WASTE MANAGEMENT
HAZARDOUS WASTE INSPECTION REPORT

DWM-029

GENERATOR INSPECTION REPORT

FACILITY INFORMATION

FACILITY NAME: DEGUSSA Corporation - Metz Division

FILE NUMBER:

VHT FACILITY FILE NUMBER:

PERMIT #:

REGION: II

INSPECTION DATE: 4-30-92

INCIDENT/CASE NUMBER:

INSPECTION TYPE:

RESPONSIBLE AGENCY CODE:

INSPECTOR'S NAME: Alexis D Vitone

INSPECTOR'S AGENCY: Alliance Tech.

INSPECTOR'S BUREAU: Alliance Tech.

EPA ID NUMBER: NJD002195303

ADDRESS: 3900 South Clinton Avenue
South Plainfield, NJ 07080

LOT: 29.02/1.02 BLOCK: 467.01/470.01

COUNTY: Middlesex

FACILITY PERSONNEL: Mr James Leahey - Permit Dept.

TELEPHONE #: 908 - 561 - 1100

OTHER STATE/EPA PERSONNEL: N/A

REPORT PREPARED BY: Alexis Vitone

REVIEWED BY:

DATE OF REVIEW:

REVISION: 3
01/88

Revised 10/90 JM

PHOTOS TAKEN (✓) YES (___) NO IF YES, HOW MANY? 2

SAMPLE TAKEN (___) YES (✓) NO NO. OF SAMPLES ___

NJDEP SAMPLE ID. #: ___ ___ ___ ___ ___

SITE BACKGROUND INFORMATION

EMPLOYEES: 310 DATE OPERATIONS BEGUN: 1966 8 hr SHIFTS/WEEK: 1 (7am-7pm)

ACRES: 11.7984 # BUILDINGS/SQft: 44,021 S.F. SIC CODE: 3356, 3369, 3399

PRODUCTS PRODUCED: Precious Metals, Precious Metal Powders & Ha

VOLUME PRODUCED (or $ value): unknown

PREVIOUS OPERATIONS AT SITE: Empty warehouse

WATER SUPPLY: Municipal - drinking, Wells - non contact water

MONITORING WELLS (explain): yes - 6 or 7 - locations not stated some observed.

SANITARY DISPOSAL: Municipal.

FLOOR DRAINS: Yes - discharge to Precious Metal Recovery unit (WATER TREAT PLAN)

AIR PERMITS: yes - 60 total of Air Permits

NJPDES PERMITS: yes

PERMITS - OTHER:

PREVIOUS ENFORCEMENT HISTORY (min 2 yrs):

unknown at the time of inspection.

TANKS ON SITE (non hazardous waste):

(N/A) for non/haz waste or haz waste - however there are substantial # of AST tanks containing raw materials, such as Sulfuric Acid, formaldehyde,

COMMENTS: Regulatory Concern - NJAC 7:26-9.6 (e) - INSUFFICIENT aisle space between drums in drum storage area.

INSPECTION & GENERAL FACILITY DESCRIPTION & OPERATIONS
Include site map when appropriate

Facility manufactures precious metals, which are sold to Electronics Companies, the metals are in powder / flake or crystal forms. The basic process is the precipitation of precious metals from liquids...

- The facility has a generator status according to Mr Leahey. There is a wastewater treatment plant onsite which generates D006, D011 in sludge form. The sludge is treated as hazardous waste and is disposed as such. For the most part, the waste generated onsite consists of spent solvents; heavy metals, such as F001, F003, F005, D001, D002, D003, D006, D007, D008, D009, D011, U151, U169, D018, D039.

The facility has numerous aboveground tanks onsite, however they are not for hazardous waste, but rather raw materials, such as formaldehyde, acetic acid, etc. All AST are permitted by NJDEPE accordingly. (Permits reviewed). According to Mr Leahey there are 31 UST, however previous personnel incorrectly listed pits underneath their Reactors - which are used to collect precious metals (if there ever was a rupture of the reactors). Mr Leahey stated that the facility is in the process of delisting them w/ the NJDEPE.

- The facility also has an onsite Catch Basin which noncontact cooling water is discharged into it and ultimately into a tributary to Bound Brook. According to Mr Leahey this is all approved and permitted by the NJDEPE, permits were reviewed and found to be in order.

(add additional pages as needed)

78

next page →

Leahey stated that the Ash from the incinerator goes to Germany for further refining of materials, if not, it is checked by Degussa for high metals contents and reused to a degree. When there is a low metal contents it is more cost effective to send it to Germany for further refining.

Degussa is also constructing another incinerator which will be exclusively for incinerating trash, and not floor sweepings etc. NJDEPE has already given approval for the new incinerator.

This facility accepts waste waters and silver scraps from opposite for the purpose of reclaiming precious metals. According to Mr Leahey, this is not a tolling agreement due to Degussa purchasing the wastewater and scraps and not returning the precious metals reclaimed from them. He stated the materials are not a hazardous waste due to them being used for reclamation of precious metals.

Facility is currently developing an Environmental Park behind the facility. There are 2 areas which contain wetlands. Mr Leahey could not provide any information regarding the Park development.

Mr Leahey stated they have approximately 79 Air Permits for Control Equipment, such as Cyclones

Degussa also discharges wastewater (from their wastewater treatment plant) into the municipal sewer system. According to Mr Leahey this discharge is also permitted by NJDEPE.
Mr. Leahey stated all drains in the facility empty into the treatment plant. He said the wastewater is routinely tested by an outside lab for contaminants prior to discharges into the sewer systems.

During the walk through, a wastewater holding tank was observed being constructed. The tank will hold approximately a quarter to a half million gallons of wastewater. This is being constructed mainly to be able to analyze the bulk of wastewater, rather than collect small samples, its more cost effective in the long run, according to Mr Leahey. He stated NJDEPE has been informed about the new construction and approval was granted.
Degussa has an incinerator onsite which is used to burn paper,

	NAME										
	EPA ID NO.										
	GENERATOR MANIFEST DATE										
	GENERATOR EPA ID NUMBER	7.4(a)(4)(i)									
	MANIFEST DOCUMENT NUMBER	7.4(a)(4)(ii)									
	PAGE 1 OF	7.4(a)(4)(iii)									
	GENERATOR NAME & MAILING ADDRESS	7.4(a)(4)									
	GENERATOR PHONE NUMBER	7.4(a)(4)									
	STATE MANIFEST DOCUMENT NUMBER	7.4(a)(4)(ii)									
	STATE GENERATOR'S ID	7.4(a)(4)									
	TRANSPORTER #1 NAME	7.4(a)(4)(i)									
	TRANSPORTER #1 EPA ID NUMBER	7.4(a)(4)(i)									
	STATE TRANS. #1 ID	7.4(a)(4)(ii)									
	TRANSPORTER #1 PHONE NUMBER	7.4(a)(4)(i)									
	TRANSPORTER #2 NAME	7.4(a)(4)(i)									
	TRANSPORTER #2 EPA ID NUMBER	7.4(a)(4)(v)									
	STATE TRANS. #2 ID	7.4(a)(4)(ii)									
	TRANSPORTER #2 PHONE NUMBER	7.4(a)(4)(i)									
	FACILITY NAME AND SITE ADDRESS	7.4(a)(4)									
	FACILITY EPA ID NUMBER	7.4(a)(4)									
	STATE FACILITY ID	N/A									
	FACILITY PHONE NUMBER	7.4(a)(4)									
	SHIPPING NAME HAZ. CLASS ID NUMBER	7.4(a)(4)(ii)									
	CONTAINERS NUMBER TYPE	7.4(a)(4)(ii)									
	TOTAL QUANTITY	7.4(a)(4)(ii)									
	UNITS	7.4(a)(4)(ii)									
	WASTE NUMBER	7.4(a)(4)(ii)									
	CONTRACTOR'S EPA OR STATE HAZ CODE	7.4(a)(4)									
	HANDLING CODES	N/A									
	HANDLING INSTRUCTIONS	7.4(a)(4)(ii)									
	GEN. PRINTED NAME	7.4(a)(4)(ii)									
	GEN. SIGNATURE	7.4(a)(5)									
	GEN. DATE AFTER SIGNATURE	7.4(a)(4)(ii)									
	TRANS. #1: PRINTED NAME	7.4(a)(4)(ii)									
	TRANS. #1: SIGNATURE	7.4(a)(5)									
	TRANS. #1: DATE AFTER SIGNATURE	7.4(a)(5)									
	TRANS. #2: NAME	N/A									
	TRANS. #2: SIGNATURE	N/A									
	TRANS. #2: DATE AFTER SIGNATURE	N/A									
	NO TSD SIGNED RETURN COPY	7.4 [illegible]									
	NO EXCEPTION REPORT	7.4(a) [illegible]									
	NO LAND RESTRICTED WASTE NOTIFICATION										
	FAILURE TO TRANSMIT GENERATOR AND DESTINATION STATE DATES	7.4(a)(5)(i)									

HAZARDOUS WASTE GENERATION

Describe in detail the activities that result in the generation of hazardous waste and the approximate quantities generated in a typical month (if appropriate):

Degreasing operations generates: D001, D039, D018.
Refining operations and lab operations generates: D001 & F003
Precious metals Recovery generates: D006-D011,

NOTE

Mr Leahey was not able to provide more information regarding the specific hazardous wastes generated, on account that Mr Scott Eves handles this aspect mostly.

The following info was retrieved from the annual report for 1991: (Quantities are for the year).

WASTE WATER CONTAINING (Methyl Alcohol, and Gold)
D001 & F003 = totalling 1160 gallons was accepted onsite for reclamation of precious metals.

D011 (Silver scrap) = 9925 pounds were accepted onsite for silver reclamation.

D011 (waste oil W/Silver) = 2990 pounds.

D001 (Waste flam Liq from production, Hexanoid & oil) = 800 pounds.

D001 & D002 = Waste Acid from Production, Acetic Acid 900 pounds.

D002, & D011
Nitric Acid & Silver nitrate = 141 pounds

waste oxidizer from lab operations = Cupric Nitrate = 10 pounds.

waste from lab; boron trichloride & Hexane - D001, D002 = 10 pounds

refer to page 16 of Annual report for additional wastes and quantities.

(add additional pages as needed)

82

GENERATOR CHECKLIST

GENERAL 7:26

		YES	NO	N/A
7.4(a)1	Does the Generator have an EPA ID number?	✓		
	Does the generator generate/store >100 kg of hazardous waste (1kg acutely) or only >1001 gal of waste oil in any given month? (except x725 - 100 kg rule applies)	✓		
	If no, does the generator wish to delist? If the generator wishes to delist, do a delisting inspection.			✓
12.1(a)	Is the site ACTING as a TSDF by: (no Part A or B)			
	Treatment of a hazardous waste?		✓	
	Storage of hazardous waste in underground tanks?		✓	
	Hazardous wastes placed in piles or surface impoundments?		✓	
	Disposal of hazardous waste on site (ie landfill, injection well)?		✓	
	Accumulation of hazardous waste for more than 90 days?		✓	

COMMENT:

9.3(a)1	Is site acting as a generator but accumulating waste (containers or approved tanks) over 90 days?	~~✓~~ PL for IDV	✓	

COMMENT:

83

		YES	NO	N/A
SOLID WASTE DETERMINATION				
1.6 (b)	Does the Generator produce any materials which meet the definition of a "solid waste". These would include any solid, liquid, semi-solid or contained gaseous material which has served or can no longer serve its original intended use. These materials include spent material, sludges (i.e. wastewater treatment sludge or material from air pollution control equipment), by-products, discarded commercial chemical products, scrap metals and residues?	✓		
Is material:				
1.	Discarded or intended to be discarded	✓		
2.	Accumulated, stored or physically, chemically or biologically treated prior to, or in lieu of, being discarded		✓	
3.	Burned for energy recovery		✓	
4.	Applied to the land or placed on land or contained in a product that is applied or placed on the land in a manner constituting disposal	✓		
5.	Recycled? (Reclaimed)	✓		✓
1.6(d)	Does the generator process any material under toll agreement pursuant to NJAC 7:26-1.4 (such material is classified as a "solid waste").		✓	
HAZARDOUS WASTE DETERMINATION				
8.5(a)	Did the generator determine if its "solid waste" is hazardous?	✓		
8.5(b)	Is the waste listed (or a mixture)? If no then:	✓		
8.5(b)(1)	Did the generator determine the hazardous characteristics based upon testing of the waste in accordance with 8.9-8.12?	✓		
	Based on characteristics, is the waste hazardous?	✓		
8.5(b)(2)	Did the generator determine the hazardous characteristics based upon knowledge of materials or process?	✓		
	Based on knowledge, is the waste hazardous?	✓		

LDF attached to manifest

84

		YES	NO	N/A
8.5(c)	If the waste is not listed or hazardous based on characteristics, has the Department requested the generator to submit a plan analyzing for the presence of hazardous waste constituents (8.16)?			✓
	If yes: Has the generator submitted the plan in a timely manner?			✓
	Has the generator conducted the approved plan and submitted the results?			✓
	Based on constituents, is the waste hazardous?			✓
8.5(d)	Were test results, waste analysis, or other determinations made in accordance with this section kept three years (in operating log) from the date that the waste was last sent to an on-site or off-site TSD?	✓		

MANIFESTS

7.4(a)4	Does each manifest have the following information? Please obtain a copy of the incomplete manifests. (List those manifests that are deficient on pg 9).			
7.4(a)4i	The generator's name, mailing address (&site address if different) and phone number.	✓		
7.4(a)4ii	The generator's EPA ID number	✓		
7.4(a)4iii	The transporter(s) name, phone number and NJ registration and decal #.	✓		
7.4(a)4iv	The transporter(s) EPA ID number	✓		
7.4(a)4v	The name, address and phone number of the designated TSD facility.	✓		
7.4(a)4vi	The TSD's EPA ID number.	✓		
7.4(a)4vii	The name, type and quantity of hazardous waste being shipped, including such particulars as may be required regarding same? Has the generator properly classified (RCRA) each waste on the manifests? Proper USDOT shipping name, hazard class, ID #, quantity, waste code?	✓		

		YES	NO	N/A
7.4(a)4viii	Special handling instructions and any other information required on form to be shipped by generator including chemical names, constituent percentages, physical states, and hazardous characteristics? (Did the generator describe all N.O.S. wastes in Section J?)	✓		
7.4(a)4ix	When shipping hazardous waste to a waste reuse facility does the generator enter the waste reuse facility I.D. # in the section G of the Uniform manifest?	✓		
7.4(a)5	Before allowing the manifested waste to leave the generator's property, did the generator:			
7.4(a)5i	Sign the manifest certification by hand?	✓		
7.4(a)5ii	Obtain the handwritten signature of the initial transporter and date of acceptance on the manifest?	✓		
7.4(a)5iii	Retain one copy and forward one copy to the state of origin and one copy to the state of destination?	✓		
7.4(a)5v	Give the remaining copies of the manifest form to the hauler?	✓		
7.4(e)2	Has the generator utilized a transporter which is properly registered?	✓		
7.4(e)3	Designated on the manifest an authorized TSD or reuse facility?	✓		
7.4(e)4	Did the generator permit the shipment of hazardous waste to an unauthorized TSD or reuse facility?		✓	
7.4(f)	Has the generator maintained facility records for three (3) years for:			
7.4(f)(1)	Manifests?	✓		
7.4(f)(2)	Annual or exception reports?	✓		
7.4(f)(3)	Has generator maintained records during course of unresolved enforcement action or as requested?	✓		
7.4(h)1	Has the generator received signed copies (from the TSD facility) of all manifests for waste shipped off site more than 35 days ago?	✓		

86

		YES	NO	N/A
7.4(h)1	If not: Did the generator contact the hauler and/or the owner or operator of the TSDF and the NJDEP at (609) 292-8341 to inform the NJDEP of the situation?			✓
7.4(h)2	Have exception reports been submitted to the Department covering any of these shipments made more than 45 days ago?			✓

MANIFESTS REVIEWED (X) YES ( ) NO

Number of manifests in compliance ~~[illegible]~~ 45 - 50

Number of manifests not in compliance 0

List manifest document numbers of those manifests not in compliance and note each deficiency:

Manifest Document Number	Discrepancy

9.4

HAZARDOUS WASTES ON SITE

Reminder:
17E - Bung Type Drum
17H - Open Top Drum

WASTE	WASTE CODE	TANK/CONTAINER	SIZE/TYPE	QUANTITY
LIQ NOS	D011	Drums	55/gal	5
WASTE DRM A, NOS	F001	Drums	55/gal	2
WASTE ~~petroleum~~	~~X726~~	Drum	55/gal	1
LIQ HW NOS	D006, D011	Drums	55/gal	4
Filter CAKE	D006, D011	Double lined ~~Bags~~ (see picture for better description) 3'x3'x3' - holds approx 1500 lbs of waste - meets FIBCA performance standards.	3'x3'x3'	11

88

		YES	NO	N/A
	SHORT TERM ACCUMULATION STANDARDS FOR GENERATORS WHO ACCUMULATE WASTE IN CONTAINERS AND TANKS FOR 90 DAYS OR LESS:			
	CONTAINERS			
	If the answer to any container questions is no, describe the problem (include number of containers & waste involved).			
9.4(d)1i	Is hazardous wastes stored in adequate containers? Comments:	✓		
9.4(d)3	Are all containers compatible with the waste being stored in them? Comments:	✓		
9.4(d)4i	Except during filling and emptying, are all containers kept securely closed so that there is no escape of Hazardous Waste or its vapors? Comments:	✓		
9.4(d)4iii	Do the containers appear to be properly handled or stored in a manner which will minimize the risk of the container rupturing and/or leaking? Comments:	✓		
9.4(d)4iv	Are containerized hazardous wastes segregated in storage by waste type? (type interpreted as DOT compatibility) Comments:	✓		
9.4(d)4v	Is every container arranged so that its identification labels or markings are visible? Comments:	✓	~~✓~~ ADV ✓	
9.4(d)5	Is the container storage area inspected daily for leaks and deterioration?	✓		
9.4(d)6	Are containers holding ignitable and reactive wastes located at least 50 feet (15 meters) from the facility's property line?	✓		
9.6(d)	Did the owner operator maintain access to communication or alarm system?	✓		

		YES	NO	N/A
9.6(e)	Adequate aisle space to allow unobstructed movement of personnel fire protection equipment, spill control equipment and decontamination equipment? (Policy is 18", 30" double stack) Comments:		✓	
7.2(a)	Did the owner/operator conspicuously label appropriate manifest number on all hazardous waste containers that are intended for shipment? Comments: Containers were not intended for shipment at time of inspection therefore manifest # not on label yet.			✓
9.3(a)3	Is each container clearly dated with each period of accumulation (when accumulation starts) so as to be visible for inspection?	✓		
	and clearly marked with words "Hazardous Waste"? Comments:	✓		
7.2(b)	Did the owner/operator insure that all containers used to transport hazardous waste off site are in conformance with applicable DOT regulations? (49CFR 171, 179)	✓		

SATELLITE ACCUMULATION AREAS

Note: Satellite rules apply for "active drums" that are being currently used to accumulate hazardous waste.

9.3(d)1	Is the quantity of waste in each accumulation area less than 55 gallons (less than one quart if acutely hazardous)?			✓

NOTE INTERPRETATION:
A second drum can be utilized until the original drum is moved within three days. The total storage capacity for any satellite accumulation area shall not exceed 110 gallons for each waste stream.

9.3(d)2	In addition to container requirements, are the containers managed in the following manner:			
	(a) meet the stds of 7.2 (Container Requirements)?			✓
	(b) managed in accordance with 9.4(d)2,3&4i (proper container storage)			✓

90

		YES	NO	N/A
9.3(d)3	Is the accumulation area at or near a point of generation where wastes initially accumulate in a process? AND, is the area under the control of the operator of the process?			✓
9.3(d)4	Are containers marked "Hazardous Waste"?			✓
9.3(d)5	Are all containers marked with the date the container(s) reached the volume specified, 55 gal. or 1 qt. AND,			✓
9.3(d)6	after reaching the volume indicated in (d)1 above is the container moved within three days to one of the following?:			
	i. A less than 90 day accumulation storage area			✓
	ii. A on-site authorized facility			✓
	iii. A off-site authorized commercial facility			✓

Describe satellite accumulation areas on site:

PILES

9.2(b)4	Is the site acting as a generator but storing hazardous waste in piles?		✓	

Describe HW accumulated in piles on site:

TANKS (underground)

9.2(b)1	Has there been installation or use of new underground HW tanks (except waste oil under 1001 gal)?		✓	
9.2(b)2	Conversion of underground tanks for use for storage of HW?		✓	
9.2(b)3	Use of existing HW underground tanks without proper monitoring (7:14A-6) OR not within specified lifetime of tank OR without proper management [10.5(e)6]?		✓	

91

TANKS (above ground, less than 90 day storage)

		YES	NO	N/A
	Does the generator accumulate hazardous waste on-site in an above ground tank? If yes:		✓	
9.3(b)	Does the generator have written approval from the Department to store hazardous waste(s) in this tank(s) for ninety days or less?			✓
9.3(b)5	Is each tank(s) rendered empty (1% or less remaining) every 90 days or less? Explain how this is determined eg logs, manifests:			✓
9.3(b)6	Are all wastes removed from the tank(s) shipped off-site to an authorized facility or placed in an on-site, authorized facility?			✓
9.3(b)8	If part of the tank is below grade, is it constructed to allow visual inspection of the tank, comparable to a totally above-ground tank and is secondary containment provided for the below grade part?			✓
9.3(b)9	Tanks labeled/marked "Hazardous Waste"?			✓
10.5(c)1	Are materials which are incompatible with the material of construction of the tank(s) placed in the tank(s)?			✓
10.5(c)2i	Does the generator use appropriate controls and practices to prevent overfilling?			✓
10.5(c)2ii	For uncovered tanks, is there sufficient (two feet or acceptable documentation) freeboard to prevent overtopping by wave or wind action or by precipitation?			✓
9.3(b)3	Does each tank(s) or storage tank area have secondary containment?			✓
10.5(d)1	Is the containment system capable of collecting and holding spills, leaks, and precipitation?			✓
10.5(d)1i	Is the base underlying the tank(s) free from cracks, gaps, and sufficiently impervious to contain leaks, spills, and accumulated rainfall until the collected material is detected and removed?			✓

92

		YES	NO	N/A
10.5(d)1ii	Does the containment system consist of material compatible with the wastes being stored?			✓
10.5(d)1iii	Is the containment system sloped or otherwise designed to efficiently drain and remove liquids resulting from leaks, spills and precipitation?			✓
10.5(d)1iii	Is the tank protected from the contact with accumulated liquids?			✓
10.5(d)1iv	Does the containment system have sufficient capacity to contain ten percent of the volume of all tanks or the volume of the largest tanks whichever is greater?			✓
10.5(d)2	Is run-on into the containment area prevented?			✓
10.5(d)3	Is precipitation removed from the pump or collection area in a timely manner to prevent blockage or overflow of the collection system?			✓
10.5(d)4	Is spilled or leaked waste removed from the pump or collection area daily?			✓
10.5(d)4i	If the collected material is hazardous waste under NJAC 7:26-8, it is managed as a hazardous waste in accordance with all applicable requirements of this chapter?			✓

PERSONNEL TRAINING

9.4(g)3	Is the training program designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency system including 9.4(g)3i through 3vii?	✓		
9.4(g)4	Have facility personnel involved with hazardous waste management successfully completed a program of classroom instruction or on-the-job training within six months of the date of their employment or assignment to the facility or to a new position at the facility?	✓		

93

		YES	NO	N/A
9.4(g)5	Has facility personnel taken part in an annual review of initial training?	✓		
9.4(g)2	Is the program directed by a person trained in hazardous waste management procedures and does it include instruction which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed?	✓		

Is there written documentation of the following:

9.4(g)6i	Job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job?	✓		
9.4(g)6ii	A written job description for each position related to hazardous waste management?	✓		
9.4(g)6iii	A written description of the type and amount of both introductory and continuing training that has been and will be given to personnel in jobs related to hazardous waste management?	✓		
9.4(g)6iv	Documentation of actual training or experience received by personnel?	✓		
9.4(g)7	Are training records kept on all current employees until closure of the facility and training records kept on former employees for three years from their last date of employment?	✓		

PREPAREDNESS AND PREVENTION

	Does the facility comply with preparedness and prevention requirements including maintaining:			
9.6(b)1	An internal communications or alarm system?	✓		
9.6(b)2	A telephone or other device to summon emergency assistance from local authorities?	✓		
6(b)3	Portable fire equipment, spill control equipment, and decontamination equipment?	✓		

		YES	NO	N/A
9.6(b)4	Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray system?	✓		
9.6(c)	Are all the above emergency equipment tested and maintained?	✓		
9.6(f)	Has the facility made the following arrangements (documented), as appropriate for the type waste handled on site:			
9.6(f)1	Familiarize police, fire departments and emergency response teams with the layout of the facility and hazardous waste handled and associated hazardous places where facility personnel would normally be working, entrances and roads inside facility and possible evacuation routes.	✓		
9.6(f)2	Where more than one police and fire department might respond to an emergency, is there an agreement designating primary emergency authority to a specific police and fire department, and agreements with others to provide support to the primary emergency authority?	✓		
9.6(f)3	Agreements with emergency response contractors, and equipment supplier?	✓		
9.6(f)4	Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illness which could result from fires, explosions, or discharges at the facility?	✓		
9.6(f)5	Arrangements with local fire departments to inspect the facility on a regular basis with at least two (2) inspections annually?	✓		
9.6(f)6	If authorities identified in (f) 1 through 5, above decline to enter into such arrangements, has the owner, or operator documented this refusal in the operating record.			✓
9.4(g)8	Are the semi-annual drills conducted involving all employees and appropriate local authorities to test emergency response capabilities at the facility in accordance with the contingency plan and emergency procedures development pursuant to NJAC 7:26-9.7?	✓		

95

		YES	NO	N/A
9.4(g)8i	If no, did the owner or operator petition the Department for an exemption from the semi-annual drill requirements?			✓
9.4(g)8ii	Did the owner or operator petition the Department for an exemption excluding some or all local officials in the semi-annual drill requirements?			✓
	If yes, did the owner operator provide those specific local officials with written approval of the exemption?			✓

CONTINGENCY PLAN AND EMERGENCY PROCEDURES

		YES	NO	N/A
9.7(a)	Does the facility have a written contingency plan for emergency procedures designed to deal with fires, explosions, hazards to human health or environment, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents into air, soil or surface water?	✓		
9.7(b)	Are provisions of the plan carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment?	✓		
9.7(c)	Does the contingency plan describes the actions facility personnel shall take in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility?	✓		
9.7(d)	Did the owner or operator prepare a a Spill Prevention, Control, and Countermeasures (SPCC) Plan in accordance with 40 CFR 112 or 300 or a Discharge Prevention Containment and Countermeasure (DPCC) Plan in accordance with N.J.A.C. 7:1E-4.1 et seq.?			✓

NOTE: DPCC >400,000 gal storage of hazardous substances

SPCC: Storage of any kind of oil and most oil products including gasoline and fuel oils
If >660 gal single tank
>1320 gal multiple tanks
>42000 gal underground storage

96

		YES	NO	N/A
	If yes, did the owner or operator amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this section?			✓
9.7(e)	Does the plan describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services?			✓
9.7(f)	Does the plan list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator and is this list kept up to date? Where more than one person is listed, one shall be named as primary emergency coordinator and others shall be listed in the order in which they will assume responsibility as alternates?			✓
9.7(g)	Does the plan include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems [internal and external] and decontamination equipment), where this equipment is required? Is the list up-to-date? In addition, does the plan include the location and physical description of each item on the list, and a brief outline of its capabilities?			✓
9.7(h)	Does the plan include an evacuation procedure for facility personnel where there is a possibility that evacuation could be necessary? Does this plan describe signal(s) to be used to begin evacuation, evacuation routes, and alternative evacuation routes (in cases where the primary route could be blocked by releases of hazardous waste or fires?)			✓
9.7(i)	Is the copy of the contingency plan and all revisions to the plan:			
	1. Maintained at the facility	✓		
	2. Has the contingency plan been submitted to local authorities (police, fire departments, emergency response teams?)	✓		

97

		YES	NO	N/A
9.7(k)	Is there an employee on site or on call at all times with the responsibility of coordinating, all emergency response measures?	✓		
9.2(a)2	Is hazardous waste handled in a manner which causes (or may or has caused) a discharge of a hazardous waste onto the land, waters or air of the State?		✓	
58:10-23.11(c)	Is there a discharge of a hazardous substance (under Spill Act)?		✓	
58:10-23.11(e)	Was it reported to the Department?			✓

SUMMARY OF VIOLATIONS:

When making a referral, list each citation and the basis for issuing the violation (add additional pages as needed):

7:26-9.6(e)
-INSUFFIENT AISLE SPACE between DRUMS in DRUM STORAGE area.

98

	Yes	no	N/A
WASTE OIL			
Does the generator ONLY generate X722 waste oil in any amount? or.		✓	
Does the generator ONLY generate or store (in above ground tanks or drums) less than 1001 gal of only waste oil (except X725 for which 100 kg rule applies) per month?			✓
7.7(d) If yes, are receipts (or manifests) obtained from registered hauler and retained for 3 yrs? (check quantities on receipts)			✓

Note: No other HW regs apply *, unless the storage of the X722 waste exceeds 1,000 gal; or unless the waste oil is also a federal (RCRA) hazardous waste.*

Does the generator generate over 100 kg of hazardous waste (or 1 kg if acutely hazardous) and any listed waste oil or generate/store *>1000* gal of waste oil in any given month?			✓

If yes, the generator must be in compliance with:
(use appropriate checklist section)

Manifests requirements (7.4)

Labeling and Container requirements [9.4(d), 7.2(a)&(b), 9.3(a)3, 9.6(e)]

Documentary Requirements [9.4(g), 9.6, 9.7]

Satellite Regs [9.3(d)]

WASTE OIL TANKS:			
Is there above ground > 1001 gal total capacity (which includes drums) but <90 day storage? [Use TANKS (above ground, less than 90 day storage) section in checklist 9.3(b)]			✓
If yes, does the generator have a letter of approval from HWENG?			✓
And is the generator in compliance with other requirements for less than 90 day storage of HW in above ground tanks [9.3(b)]?			✓

Is there above ground > 1001 gal total capacity, and >90 day storage? ____ ____ ✓

If yes, is the generator:

12.1(a) Acting as TSDF? ____ ____ ✓

9.3(a)1 Acting as a Generator? ____ ____ ✓

Does the generator store waste oil in underground tanks? ____ ____ ✓

If yes, refer to TANKS (underground) section in checklist [9.2(b)].

Note: The only exceptions to the underground tank prohibition are:

A) *New commercial service station waste oil tanks of <1001 gal capacity*
B) Underground tanks in existence and in use for HW storage prior to 1/17/83.

EP7/slw

DOCUMENT: SHOTWELL
FOLDER: SLWMCB

RCRA LAND DISPOSAL RESTRICTIONS INSPECTION

I. General Information

Facility: DEGUSSA Corporation - Metz Metallurgical Divisi

U.S. EPA ID No.: NJD002195303

Street: 3900 South Clinton Avenue

City: South Plainfield State: NJ Zip: 07080

Telephone: 908 - 561 - 1100

Inspection Date: 4/30/92 Time: 8:50 (am/pm)

Weather Conditions: Sunny to Cloudy, mod winds, low 50's

	Name	Agency/Title	Telephone
Inspectors:	Mark Vitone	Alliance Tech.	908-563-2211
Facility Representatives:	Mr James Leahey - Permits Administration Mgr.		

See Appendix B to determine which of the following LDR waste categories the facility manages:

	Generate	Transport	Treat	Store	Dispose
F001-F005 Solvents	✓				
F020-F023 and F026-F028					
California List*					
First Third [40 CFR 268.10]					
Second Third [40 CFR 268.11]					
Third Third [40 CFR 268.12]	✓				

* See Appendix A

INSPECTION SUMMARY

Processes That Generate LDR Wastes:

- Degreasing operations generates D001, D039, & D018
- Refining operations, lab operations, and wastewater trmt generates D001 & F003.
- Precious Metals Recovery generates D006, D011 and other wastes
- Facility cleans out their lab yearly and generate different smaller quantities of wastes.
- Mr Leahey stated he was not very familiar with the exact wastes generated from the processes.

D001 - D011 = Chemical Waste Management - NY OHIO.
F001-F005 hauled to: Enviro Safe Services - PA
U151 hauled to: Bethlehem Apparatus - PA
U169 " " : Ensco / Thermal Kem

Wastes are never dry disposed of at these facilities by S&W Disposal Inc after they are treated by S&W.

LDR Waste Management:

- Wastes are drummed in a 55 gallon drums and disposed of offsite by S&W Disposal Inc of Kearny, N.J.
- S&W tests the wastes and treats them to meet disposal standards.

D001, D002 - are treated by fuel blending.
D003 - deactivation and then incinerated
D006 - D011 - treated for heavy metals and then landfilled.
U151 - Landfilled or retorting
U169 - ~~incinerated~~ fuel blended for Cement Kiln
F001-F005 - ~~[illegible]~~ bulked and sent to off ~~[illegible]~~ for thermal reduction.

FACILITIES USED by S&W Inc: Enviro Safe Services - Ohio
Giant Cement Plant - S. Carolina
Chemical Waste Mgmt - Model City, NY
Bethlehem Apparatus - PA

Summary:

Mr Leahey was not able to provide alot of info regarding LDR wastes, info was retrieved from manifests and S&W Inc (Jim Knall).

Signature: [signature]

Revised 09/90

102

RCRA LAND DISPOSAL RESTRICTIONS INSPECTION

II. WASTE IDENTIFICATION

A. List waste codes which the facility handles in each of the following LDR categories*:

1. F001 through F005 spent solvents:
   F001, F003, F005

2. F020-F023 and F026-F028 dioxin-containing wastes:

3. California List Wastes (See Appendix A):

4. First Third Wastes [40 CFR 268.10]:

5. Second Third Wastes [40 CFR 268.11]:

6. Third Third Wastes [40 CFR 268.12]**:
   D002; D003; D008; D009; D006; D007; D011; U151; U169

*See Appendix B.
** Note: Effective 09/25/90, large quantity generators and TSDs are required to use the toxicity characteristic leaching procedure (TCLP) instead of the extraction procedure (EP) for determining the toxicity characteristic (TC). Small quantity generators must comply with this new requirement by 03/29/91. Wastes which exhibit TC, but do not exhibit EP, will be considered "newly identified" wastes. They will be regulated under 40 CFR Part 268 only after they are evaluated by U.S. EPA, even if they are characteristic for a constituent previously covered under the EP toxicity characteristic [55 FR 22531].

B. Waste Code Determination

1. Have all wastes been correctly identified for purposes of compliance with 40 CFR Part 268?*

   Yes ✓ No___

   If no, list below:

Assigned Classification	Correct Classification

*Areas of concern include: California List/waste categories with more stringent treatment standards; listed/characteristic; multi-source/single-source leachate; P and U waste codes/F and K wastes; and waste code carry through principle.

Comments:

2. Have both the listed and characteristic waste code been assigned, where a listed waste exhibits a characteristic? [40 CFR 268.9(a)]

Yes ✓ No ___ NA ___

Comments ___

3. Has multi-source leachate been assigned the F039 waste code?* [40 CFR 261.31]

Yes ___ No ___ NA ✓

*Leachate derived exclusively from F020-F023 and/or F026-F028 dioxin wastes retains the individual waste codes.

If yes, was single-source leachate combined to form multi-source leachate? [55 FR 22623]

Yes ___ No ___

Comments ___

C. **Does the facility handle the following wastes (national capacity variances)?**

1. F001-F005 contaminated soil and debris resulting from a CERCLA response action or a RCRA corrective action (expires - 11/08/90). [40 CFR 268.30(c)]

Yes ___ No ✓ List ___

2. Dioxin contaminated soil and debris resulting from a CERCLA response action or a RCRA corrective action (expires - 11/08/90). [40 CFR 268.31(b)]

Yes ___ No ✓ List ___

3. California list contaminated soil and debris resulting from a CERCLA response action or a RCRA corrective action (expires - 11/08/90). [40 CFR 268.32(d)(2)]

Yes ___ No ✓ List ___

4. K048-K052 petroleum wastes (nonwastewaters; expires - 11/08/90). [40 CFR 268.35 (b)]

Yes ___ No ✓ List ___

5. Soil and debris contaminated with wastes that had treatment standards based on incineration set in the Second Third rule - F010, F024, K009, K010, K011, K013, K014, K023, K027, K028, K029, K038, K039, K040, K043, K093, K094, K095, K096, K113, K114, K115, K116, P039, P040, P041, P043, P044, P062, P071, P085, P089, P094, P097, P109, P111, U028, U058, U069, U087, U088, U102, U107, U190, U221, U223, U235 (expires - 06/08/91). [40 CFR 268.34(d)]

Yes ___ No ✓ List ___

6. Soil and debris contaminated with wastes that had treatment standards set in the Third Third rule based on incineration, mercury retorting, or vitrification. See Appendix A: (expires - 05/08/92). [40 CFR 268.35(e)]

Yes ✓ No ___ List D003, [illegible], U169

7. The following nonwastewaters - F039, K031, K084, K101, K102, K106, P010, P011, P012, P036, P038, P065, P087, P092, U136, U151. (expires -05/08/92). [40 CFR 268.35(c)]

Yes ✓ No ___ List U151

8. The following wastes identified as hazardous based on a characteristic alone: D004 (nonwastewaters), D008 (lead materials stored before secondary smelting), D009 (nonwastewaters) (expires - 05/08/92). [40 CFR 268.35(c)]

Yes ___ No ___ List D009

9. Inorganic solid debris as defined in 40 CFR 268.2(g)*; includes chromium refactory bricks carrying EPA Hazardous Waste Nos. K048-K052 (expires - 05/08/92). [40 CFR 268.35(c)]

Yes ✓ No ___ List D009

*Note: Incorrect reference [40 CFR 268.2(a)(7)] in Third Third rule.

10. RCRA hazardous wastes that contain naturally occurring radioactive materials (expires - 05/08/92). [40 CFR 268.35(c)]

Yes ___ No ✓ List ___

11. Wastes listed in 40 CFR 268.10, 268.11, and 268.12 that are mixed radioactive/hazardous wastes (expires - 05/08/92)*. [40 CFR 268.35(d)]

Yes ___ No ✓ List ___

*Note: 40 CFR 268.10 and 268.11 wastes incorrectly omitted from this variance in the Third Third rule.

III. GENERATOR REQUIREMENTS

A. Treatability Group/Treatment Standard Identification*

*Note: This information is generally available on LDR notifications. If not, waste profile data and other documentation should be checked.

1. F001-F005 Spent Solvent Wastes: Does the generator correctly determine the appropriate treatability group/treatment standard for each F-solvent?

   Yes ✓ No ___ NA ___

   If available, list each waste code and check the correct treatability group.

Waste Code	Wastewater*	Nonwastewater
F001		X
F003		X
F005		X

*Less than 1% by weight total organic carbon (TOC), or less than 1% by weight total F001-F005 solvent constituents listed in 40 CFR 268.41, Table CCWE. [40 CFR 268.2(f)(1)]

Comments _____

2. F020-F023 and F026-F028 Dioxin Wastes: Does the generator correctly determine the appropriate treatability group/treatment standard for each dioxin waste?

   Yes ___ No ___ NA ✓

   If yes, list each waste code and check the correct treatability group.

Waste Code	Wastewater*	Nonwastewater

Comments _____

*Less than 1% TOC by weight and less than 1% total suspended solids (TSS) by weight. [40 CFR 268.2(f)]

3. First, Second, and Third Third Wastes:

   a. Does the generator correctly determine the appropriate treatability group/treatment standard for each waste?

      Yes ✓ No ___ NA ___

If available, list each waste code and check the correct treatability group:

Waste Code	Subcategory	Wastewater*	Nonwastewater
D006	none		X
D001	Ignitable Reactive		X
D003	Water Reactive		X
U169	NONE		X
D007	none		X

Waste code	Sub	NWW
D008	none	X
D002	Acid	X

* Less than 1% TOC by weight and less than 1% total suspended solids (TSS) with the following exceptions: K011, K013, and K014 wastewaters - less than 5% by weight TOC and less than 1% by weight TSS; K103 and K104 wastewaters - less than 4% by weight TOC and less than 1% by weight TSS. [40 CFR 268.2(f)(2) and (3)]

Comments_____

b. Do the assigned treatment standards for listed wastes cover constituents that may cause the waste to exhibit any characteristics? [40 CFR 268.9 (b)]

Yes ✓ No ___ NA ___

c. Does the generator specify alternative treatment standards for lab packs?*

Yes ___ No ✓ NA ___

*Use of the alternative treatment standards is not required. [55 FR 22629]

If yes, do lab packs only contain the following wastes?* [40 CFR 268.42(c)(2)]

___ Organometallics: 40 Part 268, Appendix IV constituents
___ Organics: 40 CFR Part 268, Appendix V constituents

*Unregulated wastes and hazardous wastes which meet treatment standards may be commingled in the appropriate Appendix IV and V lab pack. [55 FR 22629]

d. Does the generator specify alternative treatment standards for F039 multi-source leachate?*

Yes ___ No ___ NA ✓

*Use of the alternative treatment standards is required. [55 FR 22619]

4. California List Wastes: Has the generator correctly identified the treatability group and treatment standard/prohibition level for the following wastes? [55 FR 22675]

a. Liquid hazardous wastes containing PCBs ≥50 ppm

Yes ___ No ___ NA ✓

If yes, check the appropriate treatability group:

___ 50 to 500 ppm PCBs
___ ≥500 ppm PCBs

b. Listed or characteristic wastes containing ≥1,000 mg/l (liquids) or mg/kg (non-liquids) HOCs, which are not listed or characterized by the HOC content

Yes ___ No ___ NA ✓

If yes, check the appropriate treatability group:

___ Dilute HOC wastewater (1,000 mg/l to 10,000 mg/l HOCs)
___ All other HOCs greater than or equal to the prohibition level of 1,000 mg/l (liquids) or mg/kg (non-liquids)

c. Liquid hazardous wastes that exhibit a characteristic and also contain ≥ 134 mg/l nickel and/or ≥130 mg/l thallium

Yes ___ No ___ NA ✓

5. National Capacity Variance Wastes: Have all applicable California List prohibitions been identified for wastes covered under national capacity variances? (See Appendix A.)

Yes ✓ No ___ NA ___

If a wastestream contains a mixture of wastes, and a variance only applies to some of the waste codes, has the generator identified all applicable treatment standards and California List prohibitions? (See Appendix A.)

Yes ___ No ___ NA ✓

If California List prohibitions apply to wastestreams managed by the generator, complete the following table for each waste code, noting the date on which relevant national capacity variances expire.

Waste Code	Cal List Applicability	Expiration Date
U151	High Hg	5/8/92
D009	Low Hg	5/8/92
		/ /

Comments ___

6. Treatment standards expressed as required technologies: Has the generator specified an alternative method to that required in 40 CFR 268.42?

Yes ___ No ___ NA ✓

If yes, list the waste code, the technology specified in 40 CFR 268.42, the alternative method, and documentation of approval. [40 CFR 268.42(b)]

Waste Code	Required Technology	Alternative Method	Approval

Comments ___

7. Does the generator mix restricted wastes with different treatment standards for a constituent of concern?

Yes ___ No ✓

If yes, did the generator select the most stringent treatment standards? [40 CFR 268.41(b) and 268.43(b)]

Yes ___ No ___

Comments _____

B. Waste Analysis

1. Does the generator determine whether restricted wastes exceed treatment standards/prohibition levels at the point of generation?* [268.7(a)]

Yes ✓ No ___ N/A ADV

*Note: This determination may be made at the point of disposal if the waste only has a prohibition level in effect.

If no, does the generator ship all restricted wastes as not meeting treatment standards?

Yes ___ N/A ADV No ___

Comments → All wastes are shipped (sent) to S&W Disposal Inc. where it is tested and treated to meet standards for disposal.

2. Which of the following analytical methods does the generator employ?* (N/A)

*Note: A "No" answer to applicable questions b. through d. does not necessarily constitute a violation. However, knowledge of waste is rarely adequate if a generator certifies that treatment standard criteria have been met.

* NOTE * Generator sends wastes to S&W where it is tested using TCLP, confirming their onsite findings

a. Knowledge of waste:

Yes ___ No ✓

If yes, list the wastes for which applied knowledge was used and describe the basis of determination. Attach documentation. [40 CFR 268.7(a)(5)]

_____

_____

b. TCLP*: Are wastes with treatment standards specified in 40 CFR 268.41 analyzed using TCLP?** (BDAT*** = stabilization/immobilization technology)

Yes ✓ No ___ NA ___

*TCLP = Toxicity Characteristic Leaching Procedure (40 CFR Part 268, Appendix I, EPA Test Method 1311)
**See Appendix C for exceptions.
***BDAT = best demonstrated available technology. See Appendix A.

If yes, list the wastes for which TCLP was used and provide the date of last test, the frequency of testing, and note any problems. Attach test results. [40 CFR 268.7(a)(5)]

D001 — D011, F001 - F005 - last date
in docs not available for review

c. Total constituent analysis: Are wastes with treatment standards specified in 268.43 analyzed using total constituent analysis?* (BDAT = destruction/removal technology)

Yes ___ No ✓ NA ___

*See Appendix C for exceptions.

If yes, list the wastes for which total constituent analysis was used and provide the date of last test, the frequency of testing, and note any problems. Attach test results. [40 CFR 268.7(a)(5)]

d. PFLT*: Was PFLT used to determine if California List constituents were contained in *liquid* hazardous waste?

Yes ___ No ✓ NA ___

*PFLT = Paint Filter Liquids Test [Test Method 9095, EPA Publication No. SW-846]

If yes, list the wastes for which PFLT was used and provide the date of last test, the frequency of testing, and note any problems. Attach test results. [40 CFR 268.7 (a)(5)]

3. Does the generator treat restricted wastes in 90-day tanks or containers regulated under 40 CFR 262.34 (permissible in some states)?

Yes ___ No ✓ (If No, go to 4.)

Does the generator treat the wastes to meet appropriate treatment standards/prohibition levels?

Yes ___ No ___

If yes, has the generator prepared a waste analysis plan detailing the frequency of testing to be conducted? 40 CFR 268.7(a)(4)]

Yes ___ No ___ (If No, go to 4.)

Does the plan fulfill the following? [40 CFR 268.7(a)(4)(i)]

___ Based on a detailed chemical and physical analysis of a representative sample
___ Contains information necessary to treat the wastes in accordance with 40 CFR Part 268 requirements

Has the plan been filed with the Regional Administrator (return receipt, Federal Express slip, etc. required for verification)? [40 CFR 268.7(a)(4)(ii)]

Yes ___ No ___

Comments _____

4. Dilution Prohibition [40 CFR 268.3]:

a. Does the generator mix prohibited* wastes with different treatment standards?

*See Appendix E for distinction between restricted and prohibited wastes.

Yes ___ No ✓ (If No, go to b.)

List the wastes _____

Are the wastes amenable to the same type of treatment? [55 FR 22666]

Yes ___ No ___

Comments _____

b. Does the generator dilute prohibited wastes to meet treatment standard criteria, or render them non-hazardous? [55 FR 22665-22666]

Yes ___ No ✓ (If No, go to c.)

Check appropriate category:

___ Dilutes to meet treatment standards
___ Dilutes to render waste non-hazardous

Do the wastes fall into the following categories? (Check if appropriate.) [40 CFR 268.3(b)]

___ Managed in treatment systems regulated under the Clean Water Act
___ Non-toxic* characteristic wastes
___ Treatment standard specified in 40 CFR 268.41 or 268.43

*Non-toxic = D001(except high TOC nonwastewaters), D002, and D003(except cyanides and sulfides). [55 FR 22666]

If the wastes do not fall into the above categories, briefly describe the conditions under which they were diluted.

_____

c. Based on an assessment of points a. and b., and any other relevant circumstances, does the generator dilute prohibited wastes as a substitute for adequate treatment? [40 CFR 268.3(a)]

Yes ___ No ✓

Comments _____

111

5. F039 Multi-source leachate: Has the generator run an initial analysis for all constituents of concern in 40 CFR 268.41 and 268.43? [55 FR 22620]

Yes ___ No ___ NA ✓

C. **Management**

1. On-Site Management

a. Are restricted wastes treated (other than in a RCRA exempt unit), stored for greater than 90 (small quantity generator* - 180) days, or disposed on site?

Yes ___ No ✓

(If yes, the TSD Checklist must also be completed.)

* Small quantity generator = generator of greater than or equal to 100 kg/mo. but less than 1,000 kg/mo. hazardous waste, or less than 1 kg/mo. acutely hazardous waste

Comments_____

b. If the generator treats characteristic wastes in systems regulated under the Clean Water Act, have the following been documented: the determination of restriction, how restricted wastes are managed, and why wastes discharged pursuant to an NPDES permit are not prohibited (if applicable)? [55 FR 22662]

Yes ___ No ✓ NA ___

c. If the generator treats characteristic wastes in RCRA exempt units to render them non-hazardous, are the wastes managed as restricted until 40 CFR Part 268 treatment standards are met?* [40 CFR 268.9(d)]

Yes ___ No ✓ NA ___

*This applies to both concentration based treatment standards specified in 40 CFR 268.41 and 268.43, and to some 40 CFR 268.42 required methods which result in treatment below the characteristic level. See Appendix D.

2. Off-Site Management: Waste Exceeds Treatment Standards

a. Does the generator ship any waste that exceeds treatment standards /prohibition levels (not subject to a national capacity variance) to an off-site treatment or storage facility? → according to Mr Leahey

Yes ___ No ✓ (If No, go to 3.)

Identify waste code(s) and off-site treatment or storage facilities to which wastes are shipped.

Waste Code	Receiving Facility
___	_____
___	_____
___	_____

Does the generator provide a notification to the treatment or storage facility? [40 CFR 268.7(a)(1)]

Yes ___ No ___ (If No, go to 3.)

If the generator specifies alternative treatment standards for lab packs, is the certification required in 40 CFR 268.7(a)(7) or (8) included with the notification?

Yes ___ No ___ NA ___

b. Is a notification sent with each waste shipment?

Yes ___ No ___

If no, is the waste subject to a tolling agreement pursuant to 262.20(e) (small quantity generator only)?

Yes ___ No ___ (If No, go to 3.)

List waste codes and subsequent handler with whom a contractual tolling agreement is held.

Waste Code	Subsequent Handler
_____	_____
_____	_____
_____	_____

Did the small quantity generator provide a notification to the receiving facility with the first waste shipment subject to the tolling agreement? [40 CFR 268.7(a)(9)]

Yes ___ No ___

3. Off-Site Management: Waste Meets Treatment Standards

a. Does the generator ship waste that meets treatment standards/prohibition levels to an off-site disposal facility?

Yes ✓ No ___ (If No, go to 4.)

Identify waste code(s) and off-site disposal facilities:

Waste Code	Receiving Facility
D001-D011	S&W then ultimately different facilities pending on material - see 1st pg for further information
F001-F005	↓
U151, U169	↓

Does the generator provide a notification and a certification to the disposal facility? [40 CFR 268.7(a)(2)(i) and 268.7(a)(2)(ii)]?

Yes ✓ No ___ (If No, go to d.)

b. Are a notification and a certification sent with each waste shipment?

Yes ✓ No ___

If no, is the waste subject to a tolling agreement pursuant to 262.20(e) (small quantity generator only)?

Yes ___ N/A No ___ (If No, go to c.)

List waste codes and subsequent handler with whom a contractual tolling agreement is held.

Waste Code	Subsequent Handler

Did the small quantity generator provide a notification and a certification to the receiving facility with the first waste shipment subject to the tolling agreement? [40 CFR 268.7(a)(9)] N/A

Yes ___ No ___

c. Are characteristic wastes which have been rendered non-hazardous (in a RCRA exempt unit) shipped to a Subtitle D facility?

Yes ___ No ✓ NA ___ (If No or NA, go to 4.)

Complete the following table:

Waste Code	Receiving Facility

Are a notification and a certification for each shipment sent to the Regional Administrator or authorized State? [40 CFR 268.9(d)(1) and 268.7(b)(5)]?

Yes ___ No ___

4. Off-Site Management: Wastes Subject to Variances, Extensions, or Petitions

a. Does the generator ship wastes to a treatment, storage, or disposal facility which are subject to a national capacity variance (40 CFR Part 268, Subpart C), or case-by-case extension (40 CFR 268.5)?

Yes ✓ No ___ (If No, go to 5.)

Complete the following table:

Waste Code	Receiving Facility
U151	S.S.W. / Bethlehem Apparatus in Pa
D009	S.S.W. / Chemical Waste Management in Model City - N.Y.

114

Does the generator provide notification to the off-site receiving facility that the waste is not prohibited from land disposal? [40 CFR 268.7(a)(3)]

Yes ✓ when applicable No ___

b. Is a notification sent with each waste shipment?

Yes ✓ No ___

If no, is the waste subject to a tolling agreement pursuant to 40 CFR 262.20(e) (small quantity generator only)?

Yes ___ N/A No ___ (If No, go to 5.)

List waste codes and subsequent handler with whom a contractual tolling agreement is held.

Waste Code	Subsequent Handler
___	_____
___	_____
___	_____

Did the small quantity generator provide a notification to the receiving facility with the first waste shipment subject to the tolling agreement? [40 CFR 268.7(a)(9)] (N/A)

Yes ___ No ___

5. Records Retention

Does the generator retain on site copies of all notifications, certifications, and other relevant documents for a period of 5 years? [40 CFR 268.7(a)(6)]

Yes X No ___

Are copies of relevant tolling argreements, along with the LDR notification and/or certification, kept on site for at least 3 years after expiration or termination of the agreement? [40 CFR 268.9]

Yes ___ No ___ NA X

Do LDR documents reflect proper management of wastes previously covered under expired national capacity variances, case by case extensions and the soft hammer provision*?

Yes X No ___ NA ___

*See Appendix B. Note that the soft hammer provision expired as of 05/08/90. Soft hammer wastes which had treatment standards established in the Third Third rule were granted a minimum 90-day national capacity variance to 08/08/90.

Comments _____

D. **Treatment Using RCRA 40 CFR Parts 264 and 265 Exempt Units or Processes**

1. Are restricted wastes treated in RCRA exempt units (i.e., boilers, furnaces, distillation units, wastewater treatment tanks, elementary neutralization, etc.)?

   Yes ___ No ✓ (If No, do not complete this section.)

   List types of waste treatment units and processes:

Waste Code	Type of Treatment	Treatment Units and Processes

2. Are treatment residuals generated from these units?

   Yes ___ No ___

   Comments _____

3. Are residuals further treated, stored for greater than 90/180 days, or disposed on site?

   Yes ___ No ___ NA ___

   (If yes, the TSD checklist must also be completed.)

E. **Additional Comments, Concerns, or Issues Not Addressed in the Checklist:**

See front page –

N/A from here to end

IV. TSD REQUIREMENTS

A. Waste Analysis [40 CFR 268.7(b), 264.13, and 265.13]

1. Does the waste analysis plan address the following LDR waste categories? [40 CFR 264.13(b)(6) and 265.13(b)(6)]

F001-F005 Spent Solvents	Yes ___	No ___	NA ___
F020-F023 and F026-F028 Dioxins	Yes ___	No ___	NA ___
California List Wastes	Yes ___	No ___	NA ___
First, Second, and Third Third Wastes	Yes ___	No ___	NA ___

Comments_____

2. Has the waste analysis plan been revised to address F039 multi-source leachate?

   Yes ___ No ___ NA ___

3. What date was the waste analysis plan last revised? ___/___/___

4. Does analytical data contain all the information required to treat, store, or dispose of restricted wastes? [40 CFR 264.13(a)(1) and 265.13(a)(1)]

   Yes ___ No ___

   If yes, which of the following are sources of analytical data? (More than one may apply.):

   ___ Generator provides data
   ___ Facility performs analyses in on-site laboratory
   ___ Facility contracts analyses at off-site laboratory

   If the generator provides data, does the facility provide corroborative testing? [40 CFR 264.13(a)(2) and 265.13(a)(2)]

   Yes ___ No ___ NA ___

   If analyses are conducted off site, identify lab:_____

   a. Are wastes with treatment standards specified in 40 CFR 268.41 analyzed using the toxicity characteristic leaching procedure (TCLP)?* (BDAT** = stabilization/immobilization technology) [40 CFR 268.7(b)(1)]

      Yes ___ No ___ NA ___

*See Appendix C for exceptions.
**BDAT = best demonstrated available technology. See Appendix A.

If yes, list the wastes for which TCLP was used and provide the date of last test, frequency of testing, and note any problems. Attach test results. [40 CFR 264.73 (b)(3) and 265.73(b)(3)]

_____

_____

b. Are wastes with treatment standards specified in 40 CFR 268.43 analyzed using total constituent analysis?* (BDAT = destruction/removal technology) [40 CFR 268.7(b)(3)]

Yes ___ No ___ NA ___

*See Appendix C for exceptions.

If yes, list the wastes for which total constituent analysis was used and provide the date of last test, frequency of testing, and note any problems. Attach test results. [40 CFR 264.73 (b)(3) and 265.73(b)(3)]

_____

_____

c. Is the paint filter liquids test (PFLT) used to determine if California List wastes are contained in *liquid* hazardous waste? [40 CFR 268.32(i)]

Yes ___ No ___ NA ___

If yes, list the wastes for which PELT was used and provide the date of last test, the frequency of testing, and note any problems. Attach test results. [40 CFR 264.73(b)(3) and 265.73(b)(3)]

_____

_____

B. Operating Record [40 CFR 264.73 and 265.73]

1. Does the operating record contain records and results of waste analyses performed as specified in 40 CFR 268.4 and/or 40 CFR 268.7(b)? [40 CFR 264.73(b)(3) and 265.73(b)(3)]

Yes ___ No ___

2. Does the operating record contain copies of LDR notifications and certifications?* [40 CFR 264.73(b)(11), (13), and (15) and 40 CFR 265.73(b)(11), (13), and (15)]

Yes ___ No ___

*Include both those received from generators, and those prepared for off-site shipments.

3. Does the operating record include appropriate documentation for restricted wastes which are managed wholly on site? [40 CFR 264.73(b)(12), (14), and (16) and 265.73(b)(12), (14), and (16)]

Yes ___ No ___ NA ___

Does the documentation discussed in points 2. and 3. reflect proper historical management of wastes previously covered under expired national capacity variances, case by case extensions, and the soft hammer provision?*

Yes ___ No ___ NA ___

*Note that the soft hammer provision expired as of 05/08/90. Soft hammer wastes which had treatment standards established in the Third Third rule were granted a minimum 90-day national capacity variance to 08/08/90.

C. Storage [40 CFR 268.50]

1. Are prohibited* wastes stored on site in containers?

Yes ___ No ___ (If No, go to 2.)

*See Appendix E for distinction between restricted and prohibited wastes.

Are all containers clearly marked to identify the contents and date(s) entering storage? [40 CFR 268.50(a)(2)(i)]

Yes ___ No ___

Have wastes been stored for more than one year since the applicable LDR regulations went into effect?

Yes ___ No ___ (If No, go to 2.)

Can the facility show that such accumulation is necessary to facilitate property recovery, treatment, or disposal? [40 CFR 268.50 (c)]

Yes ___ No ___

If yes, state how:_____

2. Are prohibited wastes stored on site in tanks?

Yes ___ No ___ (If No, go to 3.)

Are all tanks clearly marked with a description of the contents, the quantity of each hazardous waste received, and date each period of accumulation begins, or is such information recorded and maintained in the operating record? [40 CFR 268.50(a)(2)(ii)]

Yes ___ No ___

Have tanks been emptied at least once per year since the applicable LDR regulations went into effect?

Yes ___ No ___ (If Yes, go to 3.)

Can the facility show that such accumulation is neccesary to facilitate proper recovery, treatment, or disposal? [40 CFR 268.50(c)]

Yes ___ No ___

If yes, state how:_____

3. Does the facility store liquid hazardous waste containing PCBs at concentrations greater than or equal to 50 ppm?

Yes ___ No ___ (If No, go to D.)

Does the facility meet the TSCA criteria in 40 CFR 761.65(b)? [40 CFR 268.50(f)]

Yes ___ No ___

Have these wastes been stored for more than one year? [40 CFR 268.50(f)]

Yes ___ No ___

D. Treatment

1. Does the facility treat restricted wastes other than in surface impoundments?

Yes ___ No ___ (If No, do not complete this section. Go to E.)

2. Are required technologies used to treat wastes which have treatment standards specified in 40 CFR 268.42? [40 CFR 268.40(b)]

Yes___ No___ NA___ (If Yes or NA, go to 3.)

Was an alternative method approved?

Yes___ No___

List each waste code, the technology specified in 40 CFR 268.42, and the alternative method. Check if approval of the alternative method is documented. [40 CFR 268.42(b)]

Waste Code	Required Technology	Alternative Method	Approval

3. Lab packs: If alternative treatment standards are specified, are incinerator residues from lab packs containing D004, D005, D006, D007, D008, D010, and D011 treated in compliance with the subpart D treatment standards for these characteristic wastes? [40 CFR 268.42(c)(4)]

Yes___ No___ NA___

4. Describe all other waste codes and treatment processes:

Waste Code	Treatment Processes
_____	_____
_____	_____
_____	_____

5. Characteristic wastes:

Is the 40 CFR Part 268 treatment standard lower than the 40 CFR Part 261 characteristic level?*

Yes ___ No ___

*This applies to both concentration based treatment standards specified in 40 CFR 268.41 and 268.43, and to some 40 CFR 268.42 required methods which result in treatment below the characteristic level. See Appendix D.

If yes, does the facility manage the waste as restricted until 40 CFR Part 268 treatment standards are met, even after the waste is rendered non-hazardous? [40 CFR 268.9(d)]

Yes ___ No ___

Comments_____

6. Dilution Prohibition [40 CFR 268.3]:

a. Does the facility mix prohibited wastes with different treatment standards?

Yes ___ No ___ (If No, go to c.)

List the wastes_____

b. Are the wastes amenable to the same type of treatment? [55 FR 22666]

Yes ___ No ___

If yes, is this method used for the aggregated wastes?

Yes ___ No ___

Comments_____

c. Based on an assessment of points a. and b., or any other relevant information, is dilution used as a substitute for treatment? [40 CFR 268.3(a)]

Yes ___ No ___

Comments_____

7. Does the facility, in accordance with an acceptable waste analysis plan, test residues from all treatment processes? [40 CFR 268.7(b)]

Yes ___ No ___

Comments _____

8. Does the facility ship any characteristic wastes which have been rendered non-hazardous to a Subtitle D facility?

Yes ___ No ___ (If No, go to 9.)

Complete the following table:

Waste Code	Receiving Facility
___	_____
___	_____
___	_____

Are a notification and a certification for each shipment sent to the Regional Administrator or authorized State? [40 CFR 268.9(d)(1) and 268.7(b)(5)]

Yes ___ No ___

9. Does the facility ship any wastes or treatment residues to an off-site land disposal facility?

Yes ___ No ___ (If No, go to 10.)

Complete the following table:

Waste Code	Receiving Facility
___	_____
___	_____
___	_____

Are a notification and a certification provided to the land disposal facility with each waste shipment? [40 CFR 268.7(b)(4) and 40 CFR 268.7(b)(5)]

Yes ___ No ___

10. Does the facility ship any wastes or treatment residues to be further managed at a different treatment or storage facility?

Yes ___ No ___ (If No, go to E.)

Complete the following table:

Waste Code	Receiving Facility
____	_____
____	_____
____	_____

Are appropriate generator notifications and certifications provided to the receiving facility with each waste shipment? [40 CFR 268.7(b)(6)]

Yes ___ No ___

E. **Surface Impoundments [40 CFR 268.4]**

1. Are restricted wastes placed in surface impoundments for treatment?

   Yes ___ No ___ (If No, go to F.)

   List _____

2. Are evaporation or dilution the only recognizable treatment occurring in the surface impoundment? [40 CFR 268.3(a) and 268.4(b)]

   Yes ___ No ___

   Comments _____

3. Has the facility submitted to the Agency a waste analysis plan and certification of compliance with minimum technology requirements and ground-water monitoring requirements? [40 CFR 268.4(a)(4)]

   Yes ___ No ___

4. If the minimum technology requirements have not been met, has a waiver been granted for that unit? [40 CFR 268.4(a)(3)(ii)]

   Yes ___ No ___ NA ___

5. Are representative samples of sludge and supernatant from the surface impoundment tested separately, acceptably, and in accordance with the sampling frequency and analyses specified in the waste analysis plan? (Attach test results.) [40 CFR 268.4(a)(2)(i)]

   Yes ___ No ___

6. Does the operating record adequately document the results of waste analyses performed in accordance with 40 CFR 268.4? [40 CFR 264.73(b)(3) and 265.73(b)(3)]

   Yes ___ No ___

   Comments _____

7. Do the treatment residues (sludges or liquids) exceed applicable treatment standards/prohibition levels?

Sludge Yes ___ No ___ Waste Code _____
Supernatant Yes ___ No ___ Waste Code _____

Provide the frequency of analyses conducted on treatment residues:

_____

8. If sludge residues exceed treatment standards/prohibition levels, are they removed on an annual basis? [40 CFR 268.4(a)(2)(ii)]

Yes ___ No ___ NA___

Comments _____

Are residues subsequently managed in another surface impoundment? [40 CFR 268.4(a)(2)(iii)]

Yes ___ No ___

9. If supernatant is determined to exceed treatment standards, is annual throughput greater than impoundment volume? [40 CFR 268.4(a)(2)(ii)]

Yes ___ No ___ NA___

Comments_____

F. **Land Disposal**

1. Are restricted wastes placed in or on the land in units such as landfills, surface impoundments*, waste piles, land treatment units, salt domes/beds, mines/caves, concrete vaults, or bunkers? [40 CFR 268.2(c)]

Yes ___ No ___ (If No, go to G.)

*Note: Do not include surface impoundments addressed in E.

If yes, specify which units and what wastes each unit has received:

Unit	Waste

2. Does the facility, in accordance with an acceptable waste analysis plan, test prohibited wastes prior to land disposal to ensure that all applicable treatment standards and/or prohibition levels have been met? [40 CFR 268.7(c)(2)]

Yes ___ No ___

Comments_____

3. Does the facility test wastes to ensure that they do not exhibit any characteristics at the point of disposal?* [40 CFR 268.9(c)]

Yes ___ No ___ NA___

*Note: A waste may exceed a characteristic level only if the treatment standard for that characteristic has been met.

4. Does the operating record adequately document the results of waste analyses performed in accordance with 40 CFR 268.7(c)? [40 CFR 264.73(b)(3) and 265.73(b)(3)

Yes ___ No ___

If yes, at what frequency are analyses performed?_____

_____

5. Does the facility land dispose of restricted wastes which are not prohibited?

Yes ___ No ___ (If No, go to 6.)

List waste codes in appropriate category below:

National Capacity Variance (40 CFR Part 268, Subpart C)_____
Case-By-Case Extension (40 CFR 268.5)_____
No-Migration Petition (40 CFR 268.6)_____
Treatment Standard Variance (40 CFR 268.44)_____

Does the operating record contain records of the quantities, date of placement, and a copy of the generator notification [40 CFR 268.7(a)(3)] for each shipment of restricted waste subject to a case-by case extension or no-migration petition? [40 CFR 264.73(b)(10) and 265.73(b)(10)]

Yes ___ No ___ NA ___

Do land disposal units receiving wastes covered by a national capacity variance or case-by-case extension meet the requirements in 40 CFR 268.5(h)(2)?

Yes ___ No ___ NA ___

If the facility has a case-by-case extension, is progress being made as described in reports to the Regional Administrator?

Yes ___ No ___ NA ___

6. Are restricted wastes placed in underground injection wells?

Yes ___ No ___ List _____

G. **Other Wastestreams**

1. Does the facility generate wastes other than residues from RCRA treatment units?

   Yes ___ No ___ (If No, go to H.)

2. On-Site Management

   a. If characteristic wastes are treated in systems regulated under the Clean Water Act, have the following been documented: the determination of restriction, how restricted wastes are managed, and why wastes discharged pursuant to an NPDES permit are not prohibited (if applicable)? [55 FR 22662]

      Yes ___ No ___ NA ___

   b. If characteristic wastes are treated in RCRA exempt units to render them non-hazardous, are the wastes managed as restricted until 40 CFR Part 268 treatment standards are met?* [40 CFR 268.9(d)]

      Yes ___ No ___ NA ___

      *This applies to both concentration based treatment standards specified in 40 CFR 268.41 and 268.43, and to some 40 CFR 268.42 required methods which result in treatment below the characteristic level. See Appendix D.

3. Off-Site Management: Waste Exceeds Treatment Standards

   Are wastes that exceed treatment standards/prohibition levels (not subject to a national capacity variance) shipped to an off-site treatment or storage facility?

   Yes ___ No ___ (If No, go to 4.)

   Identify wastes code(s) and off-site treatment or storage facilities to which wastes are shipped.

Waste Code	Receiving Facility
___	_____
___	_____
___	_____

   Are LDR notifications provided for each shipment to the treatment or storage facility? [40 CFR 268.7(a)(1)]

   Yes ___ No ___ (If No, go to 4.)

If alternative treatment standards are specified for lab packs, is the certification required in 40 CFR 268.7(a)(7) or (8) included with the notification?

Yes ___ No ___ NA ___

4. Off-Site Management: Wastes Meets Treatment Standards

a. Are wastes that meet treatment standards/prohibition levels shipped to an off-site disposal facility?

Yes ___ No ___ (If No, go to 5.)

Identify waste code(s) and off-site disposal facilities:

Waste Code	Receiving Facility
_____	_____
_____	_____
_____	_____

Are LDR notifications and certifications provided for each shipment to the disposal facility? [40 CFR 268.7(a)(2)(i) and 268.7(a)(2)(ii)]?

Yes ___ No ___ (If No, go to b.)

b. Are characteristic wastes which have been rendered non-hazardous (in a RCRA exempt unit) shipped to a Subtitle D facility?

Yes ___ No ___ NA ___ (If No or NA, go to 5.)

Complete the following table:

Waste Code	Receiving Facility
_____	_____
_____	_____
_____	_____

Are a notification and a certification for each shipment sent to the Regional Administrator or authorized State? [40 CFR 268.9(d)(1) amd 268.7(b)(5)?

Yes ___ No ___

5. Off-Site Management: Wastes Subject to Variances, Extensions, or Petitions

a. Are wastes that are subject to a national capacity variance (40 CFR Part 268. Subpart C) or a case-by-case extension (40 CFR 268.5) shipped to a treatment, storage, or disposal facility?

Yes ___ No ___ (If No, go to 6.)

Complete the following table:

Waste Code	Receiving Facility
_____	_____
_____	_____
_____	_____

b. Are LDR notifications (stating that the waste is not prohibited from land disposal) provided for each shipment to the off-site receiving facility? [40 CFR 268.7(a)(3)]

Yes ___ No ___

6. Dilution Prohibition [40 CFR 268.3]:

a. Are prohibited* wastes with different treatment standards mixed?

*See Appendix E for distinction between restricted and prohibited wastes.

Yes ___ No ___ (If No, go to b.)

List the wastes_____

Are the wastes amenable to the same type of treatment? [55 FR 22666]

Yes ___ No ___

Comments_____

b. Are prohibited wastes diluted to meet treatment standard criteria, or render them non-hazardous? [55 FR 22665-22666]

Yes ___ No ___ (If No, go to c.)

Check appropriate category:

___Dilutes to meet treatment standards
___Dilutes to render waste non-hazardous

Do wastes fall into the following categories? (Check if appropriate.) [40 CFR 268.3(b)]

___Managed in treatment systems regulated under the Clean Water Act
___Non-toxic* characteristic wastes
___Treatment standard specified in 40 CFR 268.41 or 268.43

*Non-toxic = D001 (except high TOC nonwastewaters), D002, and D003 (except cyanides and sulfides). [55 FR 22666]

If the wastes do not fall into the above categories, briefly describe the conditions under which they were diluted.

_____
_____
_____

c. Based on an assessment of points a. and b., and any other relevant circumstances, are prohibited wastes diluted as a substitute for adequate treatment? [40 CFR 268.3(a)]

Yes ___ No ___

Comments_____

H. **Additional Comments, Concerns, or Issues Not Addressed in the Checklist:**

_____
_____
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State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD002195 0358 Manifest Document No. 063

2. Page 1 of 1

Information in the shaded ... is not required by Fed... law.

3. Generator's Name and Mailing Address
Attn: Dave Blanar
201-561-1100
Metz Metallurgical Corporation
3900 S. Elinton Avenue
South Plainfield, N.J. 07080

4. Generator's Phone

A. State Manifest ... NJA...

B. State Generator ...

5. Transporter 1 Company Name
Disposal Systems Inc.

6. US EPA ID Number NJD156163438

C. State Trans. ...

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Ph...

E. State Trans. ID ...

9. Designated Facility Name and Site Address
S & W Waste Inc.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number NJD991291105

F. Transporter's Ph...

G. State Facility's ...

H. Facility's Ph...

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.
a.	X	(RQ) Hazardous Waste Solid, NOS ORM-E, NA9189 (D006, D007, D008)	X 53	PP	2[illegible]	
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
S,E,T
a.
b.
c.
d.

K. Handling Codes ...
a. [illegible]
b.

15. Special Handling Instructions and Additional Information
S & W - 004500 - 261
Contains - Cr 5-90% Fe 5-20% Ni 2-40% Pb 2-40%
Cr 1-10% Cu 10-70% Mg 2-40%
Decal #63370
Driver Equipped with ERG
24 hour emergency response number 201-561-1100

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: DAVID BLANAR
Signature: David Blanar
Month Day Year: 10 11 91

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Charles W. Conner
Signature: [signature]
Month Day Year: 10 11 91

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

130

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest ...
Printed/Typed Name: Pamela Ruhold
Signature: Pamela Ruhold
Month Day Year: 10 11 91

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

In case of an emergency or spill immediately call the state the emergency occurred ... the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

3 — TSD MAIL TO - GENERATOR

VHW-001 (REV. 8/85)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. N J D 0 0 0 2 1 9 5 3 0 3 — Manifest Document No. 5 8 0 5 3

2. Page 1 of 7 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Attn: Dave Blonar
201-561-1100
Metz Metallurgical Corporation
2900 S. Clinton Avenue
South Plainfield, N.J. 07080

4. Generator's Phone ( )

A. State Manifest Document Number: NJA 1258063

B. State Generator's ID: Same

5. Transporter 1 Company Name: Disposal Systems Inc.
6. US EPA ID Number: N J D 1 5 6 1 6 2 4 3 8

C. State Trans. ID: [illegible]

7. Transporter 2 Company Name:
8. US EPA ID Number:

D. Transporter's Phone ([illegible])

E. State Trans. ID:

9. Designated Facility Name and Site Address
S & W Waste Inc.
105 Jacobus Avenue
South Kearny, N.J. 07032
10. US EPA ID Number: N J D 9 9 1 2 7 1 1 0 5

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone ( )

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a.	X	[illegible] Hazardous Waste Solid, NOS CRM-E, NA9189 (D006, D007, D008)	X	DM	24379	[illegible]
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
S.E.T. =
a. c.
b. d.

K. Handling Codes for Wastes Listed Above
a. c.
b. d.

15. Special Handling Instructions and Additional Information
S & W - 004500 - 231 Decal #[illegible]
Contains - Cd 5-70% Fe 5-20% Ni 2-40% Pb 2-40% Driver Equipped with ERG
Cr 1-10% Cu 10-70% Mg 2-40% 24 hour emergency response number 201-561-1100

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: [illegible] — Signature: [illegible] — Month Day Year: [illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Charles W. Conner — Signature: [illegible] — Month Day Year: [illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space

131

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: — Signature: — Month Day Year:

GENERATOR

TRANSPORTER

FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and [illegible] J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

WASTE PROFILE SHEET ADDENDUM

EPA Waste Number	Contaminant	Regulatory Level*	Circle One		If YES, you must indicate actual Level.
D031	Heptachlor (& its hydroxide)	≥0.008	Yes	No	
D032	Hexachlorobenzene	≥0.13**	Yes	No	
D033	Hexachlorobutadiene	≥0.5	Yes	No	
D034	Hexachloroethane	≥3.0	Yes	No	
D035	Methyl ethyl ketone	≥200.0	Yes	No	
D036	Nitrobenzene	≥2.0	Yes	No	
D037	Pentrachlorophenol	≥100.0	Yes	No	
D038	Pyridine	≥5.0**	Yes	No	
D039	Tetrachloroethylene	≥0.7	Yes	No	
D040	Trichloroethylene	≥0.5	Yes	No	
D041	2,4,5-Trichlorophenol	≥400.0	Yes	No	
D042	2,4,6-Trichlorophenol	>2.0	Yes	No	
D043	Vinyl chloride	≥0.2	Yes	No	

Please indicate whether the above information is based on generator knowledge as per 40 CFR Part 268.7(A)(5)*** ✓ or analytical data ___

I understand that this information is necessary for the pro management and classification of waste material and that any person knowingly misrepresents this information can be guilty of a Crimi Offense under the provisions of NJSA 13:1E-1 et seq.

DAVID BLANAR — PRINT NAME

Supervisor — TITLE

David Blanar — GENERATOR'S SIGNATURE

10/24/91 — DATE

*As defined by the TCLP Method 1311. EP Toxicity is no lon acceptable.

**If o-,m-, and p-Cresol concentrations cannot be differentiated, total cresol (D026) concentration is used. The regulatory level total cresol is 200 mg/l.

***40 CFR Part 268.7 (a) (5) States that "If a generator determines whether the waste is restricted based solely on his knowledge of the waste, all supporting data used to make this determination must be retained on-site in the generators files. This data must be retained on-site for at least five years".

S&W WASTE INC. 115 JACOBUS AVENUE SOUTH KEARNY, NEW JERSEY 07032 (201) 344-4004

LAND DISPOSAL NOTIFICATION AND CERTIFICATION FORM

Generator Name: Mafe Metallurgical Corporation Manifest Doc. No. NJA1258063

EPA ID #: NJD 002 195 303 State Manifest No. _____

1. Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE:
   ✓ Non-Wastewater _____ Wastewater
2. If this waste is subject to any California List Restrictions enter the letter from Page 3 (either A, B1, B2, C, or D) next to each restriction that is applicable: _____ HOCs, _____ PCBs, _____ Acid, ✓ Metals, _____ Cyanides. See reverse for California List Restrictions.
3. Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the corresponding subcategory, or check NONE if the waste code has no subcategory. Also check which treatment standards apply. If spent solvent waste codes are listed on this form (F001, F002, F003, F004, F005) please refer to the instructions on the reverse (top) of this page. If F039, multi-source leachate applies, those standards must be attached by the generator.

4. MANIFEST	5. APPROVAL NUMBER	6. USEPA HAZARDOUS WASTE #	7. SUBCATEGORY ENTER THE SUBCATEGORY DESCRIPTION IF NOT APPLICABLE, SIMPLY CHECK NONE		8. APPLICABLE TREATMENT STANDARDS: PERFORMANCE BASED Check as Applicable		TECHNOLOGY: If Applicable enter Treatment Code(s)	THE WASTE BE MANAGED Enter the letter from Page 3
			DESCRIPTION	NONE	268.41(a)	268.43(a)	40 CFR 268.42 TABLE 1	
11A	261	D006		X	STABILIZE TO 1ppm TCLP			A
11A	261	D007		X	STABILIZE TO 5ppm TCLP			A
11A	261	D008		X	STABILIZE TO 5ppm TCLP			A

To list additional USEPA waste code(s) and subcategory(s), use a supplemental sheet and check here _____ I hereby certify that all information submitted in this and all associated documents is complete and accurate to the best of my knowledge and information.

David Blanco — SIGNATURE

Supervisor — TITLE

133

10/14/91 — DATE

S&W WASTE INC. 115 JACOBUS AVENUE SOUTH KEARNY, NEW JERSEY 07032 (201) 344-4004

ADDENDUM TO S&W WASTE, INC. WASTE PROFILE SHEET

Generator's Name: Metz Metallurgical Corporation

Generator's Address: 3900 S. Clinton Avenue
South Plainfield, N.J. 07080

S&W Waste Approval Code Number: 261

Please indicate if the waste contains the indicated characteristic toxicity as defined in 40 CFR 261.24 (Table 1).

EPA Waste Number	Contaminant	Regulatory Level*	Circle One		If YES, you must indicate actual level
D004	Arsenic	≥5.0	Yes	No	
D005	Barium	≥100.0	Yes	No	
D006	Cadmium	≥1.0	Yes	No	
D007	Chromium	≥5.0	Yes	No	
D008	Lead	≥5.0	Yes	No	
D009	Mercury	≥0.2	Yes	No	
D010	Selenium	≥1.0	Yes	No	
D011	Silver	≥5.0	Yes	No	
D012	Endrin	≥0.02	Yes	No	
D013	Lindane	≥0.4	Yes	No	
D014	Methoxychlor	≥10.0	Yes	No	
D015	Toxaphene	≥0.5	Yes	No	
D016	2,4-D	≥10.0	Yes	No	
D017	2,4,5-TP Silver	≥1.0	Yes	No	
D018	Benzene	≥0.5	Yes	No	
D019	Carbon Tetrachloride	≥0.5	Yes	No	
D020	Chlordane	≥0.03	Yes	No	
D021	Chlorobenzene	≥100.0	Yes	No	
D022	Chloroform	≥6.0	Yes	No	
D023	o-Cresol	≥200.0**	Yes	No	
D024	m-Cresol	≥200.0**	Yes	No	
D025	p-Cresol	≥200.0**	Yes	No	
D026	Cresol	≥200.0**	Yes	No	
D027	1,4-Dichloro-benzene	≥7.5	Yes	No	
D028	1,2-Dichloroe-thane	≥0.5	Yes	No	
D029	1,1-Dichloroe-thylene	≥0.7	Yes	No	
D030	2,4-Dinitro-toluene	≥0.13**	Yes	No	

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. 911011
2. Page 1 of 2 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
METZ METALLURGICAL
1900 S. CLINTON AVE. S. PLAINFIELD, NJ 07080
4. Generator's Phone (908) 561-1100

5. Transporter 1 Company Name | 6. US EPA ID Number
ECOVLO, INC.

7. Transporter 2 Company Name | 8. US EPA ID Number

9. Designated Facility Name and Site Address | 10. US EPA ID Number
ECOVLO, INC.
2736 PATTERSON ST. GREENSBORO, NC 27407

NJA 4150346

G. State Facility's ID

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. X WASTE FLAMMABLE LIQUID, NOS (CYCLO-HEXANONE, METHYL ETHYL KETONE) FLAMMABLE LIQUID UN1993	X X 2	DF	X X 1130	P
b. X WASTE WATER REACTIVE SOLID NOS FLAMMABLE SOLID (TITANIUM HYDRIDE) UN1871	X X 1	DF	X X X 10	P
c. X WASTE TITANIUM METAL POWDER, WET WITH 20% OR MORE WATER FLAMMABLE SOLID UN1352	X X 1	DF	X X X 10	P
d. X WASTE ZIRCONIUM METAL FLAMMABLE SOLID	X 1	DF	360	P

Special Handling Instructions and Additional Information
DECAL #61461 ABOVE WEIGHTS APPROXIMATE
N/A-DISTO0001-1962, TBPU-LAB
DB#1-135
EMERGENCY CONTACT # (908) 561-1100

GENERATOR

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JAMES RIPLIN | Signature | Month Day Year 110 [illegible]

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: DANIEL CAMPBELL | Signature | Month Day Year 110 [illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

135

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name | Signature | Month Day Year

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

UNIFORM HAZARDOUS WASTE MANIFEST
(Continuation Sheet)

21. Generator's US EPA ID No.: N J D 0 0 2 1 9 5 3 0 3
Manifest Document No.: 91011
22. Page: 2 of 2
Information in the shaded areas is not required by Federal law.

23. Generator's Name: METZ METALLURGICAL
L. State Manifest Document Number: NJA1150346
M. State Generator's ID: SAME

24. Transporter 1 Company Name: ECOFLO, INC.
25. US EPA ID Number: N J D 9 8 0 8 4 [illegible] 3 2
N. State Transporter's ID: NJ(EPS-8754 *
O. Transporter's Phone: (919) 355-7925

26. Transporter ____ Company Name:
27. US EPA ID Number:
P. State Transporter's ID:
Q. Transporter's Phone:

28. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	29. Containers No	Type	30. Total Quantity	31. Unit Wt/Vol	R. Waste No.
a. WASTE FLAMMABLE SOLID, NOS (ZIRCONIUM METAL) FLAMMABLE SOLID UN 1325 (SE)	X xx2	DF	xxx20	P	D001
b. LAB-PACKED CHEMICALS NONE NONE	X xx1	DF	xxx90	P	X850
c. ~~NON-HAZARDOUS LIQUID WASTE, NOS (OIL) NONE NONE IBQU-008~~ (JB)	~~xx3~~	~~DM~~	~~x1200~~	~~P~~	~~X726~~
d. ~~NON-HAZARDOUS SOLID WASTE, NOS (OIL) NONE NONE IBQU-012~~ (JB)	~~xx2~~	~~DM~~	~~xx600~~	~~P~~	~~X725~~
e. NEW JERSEY PETROLEUM NONE NONE IBQU-008 (3)	X xx3	DM	x1200	P	X726
f. NEW JERSEY PETROLEUM, SOLIDS NONE NONE IBQU-012 (5)	X xx2	DM	x x600	P	X725
g.					
h.					
i.					

S. Additional Descriptions for Materials Listed Above
28A-B) LAB-PACK, SEE INVENTORIES
28A) S, I 28E) OIL-98%, GREASE-2%, L, N/H
28B) L, N/H 28F) WOOD, DEBRIS-98%, OIL-2%, S, N/H

T. Handling Codes for Wastes Listed Above

32. Special Handling Instructions and Additional Information *DECAL #61451 ABOVE WEIGHTS APPROXIMATE JOB#1-1355
28A-B) ST0001-1962, IBQU-LAB
28E) 12ECO-002
28F) PW015324180T

33. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: DANIEL CAMPBELL
Signature: Daniel Campbell
Date: Month 10 Day 29 Year 91

34. Transporter ____ Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year

35. Discrepancy Indication Space

136

GENERATOR
TRANSPORTER
FACILITY

ECOFLO LAND DISPOSAL RESTRICTIONS NOTIFICATION AND CERTIFICATION FORM

Generator Name: METZ METALLURGICAL Manifest Doc. No.: 91011

Generator USEPA I.D. No.: NJD002195303 State Manifest No.: NJA1150346

This form is submitted to ECOFLO, INC. in accordance with 40 CFR Part 268.

SECTION I. IDENTIFICATION OF THE WASTE

I have identified the waste and provided the appropriate information below to indicate how my waste must be managed to conform to the land disposal restrictions.

A. Identify all U.S.EPA hazardous waste codes that apply to this waste shipment in the spaces provided below. For each waste code, check the appropriate Treatability Group, Non-wastewater (NWW) or wastewater, in Column 2; enter the appropriate Subcategory, if applicable, in Column 3 and also enter Inorganic Solid Debris (ISD) or Soil and Debris (S&D) in Column 3 if the waste is eligible for a variance under one of these subcategories; in Column 4, check the regulatory reference where the appropriate treatment standard(s) may be found; and, in Column 5, reference the appropriate paragraph(s) from Section II of this page and if the waste is the subject of a variance, enter "V," and the variance expiration date.

B. If the waste is a California List waste or a spent solvent (F001-F005), complete the boxes below appropriately. ALSO, for California List waste, check the spaces in Table 2 indicating which California List parameter(s) is exceeded and for F001-F005 solvents, circle the appropriate F-code(s) in Table 3.

☐ Check here if using a continuation sheet.

REF #	1. HAZARDOUS WASTE CODE(S)	2. TREATABILITY GROUP 2.a. NWW	2.b. WW	3. SUBCATEGORY (Enter Appropriate Subcategory If Applicable. And If The waste Is Inorganic Solid Debris (ISD) Or Soil And Debris (S&D) Subject To A Variance, Enter These Subcategories As Appropriate)	4. APPLICABLE TREATMENT STANDARDS (Check As Applicable) 4.a. Performance Based 268.41(a)	268.43(a)	4.b. Specified Technology 268.42	5. HOW MUST THE WASTE BE MANAGED? (Reference Section II Paragraph Or Variance Date If Applicable)
	F003	✓		NONE	✓			A.1
	F005	✓		NONE	✓			A.1
	D001	✓		Ignitable Reactive			✓	A.2
	D003	✓		Water Reactive			✓	A.2

SECTION II. HOW MUST THE WASTE BE MANAGED?

A.1 THIS RESTRICTED WASTE REQUIRES TREATMENT TO A PERFORMANCE STANDARD

A.2 THIS RESTRICTED WASTE REQUIRES TREATMENT BY A SPECIFIED TECHNOLOGY

B.1 THIS RESTRICTED WASTE HAS BEEN TREATED TO THE PERFORMANCE STANDARDS

B.2 THIS RESTRICTED WASTE, FOR WHICH THE TREATMENT STANDARD IS EXPRESSED AS A SPECIFIED TECHNOLOGY, HAS BEEN TREATED BY THE SPECIFIED TECHNOLOGY

C. THIS RESTRICTED WASTE IS SUBJECT TO A VARIANCE

D. THIS RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT

I certify that all information submitted in this and all associated documents is complete and accurate to the best of my knowledge and information.

137

Signature [signature] Title ENV CONT. SUPV Date 10/29/91

ECOFLO LDR Form 11/21/90

_____ 1) pH≤2.0 _____ 2) Liquid PCB≥50ppm (INCIN) _____ 3) Non-liquid HOC's ≥1000

_____ 4) Halogenated organic carbon (HOC's) ≥1000 mg/L(INCIN)

_____ 5) Liquids or any free liquids associated with any solid or sludge, containing the following metals or compounds of these meta

_____Arsenic(As)≥500 mg/l _____Cadmium(Cd)≥100 mg/l

_____Lead(Pb)≥500 mg/l _____Chromium(CrVI)≥500 mg/l

_____Mercury(Hg)≥20 mg/l _____Free Cyanides ≥1000 mg/l

_____Nickel(Ni)≥134 mg/l _____Selenium(Se)≥100 mg/l

_____Thallium(Tl)≥130 mg/l

TABLE 3 - F001, F002, F003, F004, F005 SOLVENTS

Circle the appropriate F-Solvent Code(s) above and for North Carolina generators, circle the MCF specific constituent(s) below.

CONSTITUENT	NWW	WW	CONSTITUENT	NWW	WW	CONSTITUENT	NWW	WW
Acetone (F003)	0.59	0.05	Ethylbenzene (F003)	0.053	0.05	2-Nitropropane (F005)	268.42	INCIN
n-Butyl Alcohol (F003)	5.00	5.00	Ethyl ether (F003)	0.75	0.05	Pyridine (F005)	0.33	1.12
Carbon Disulfide (F005)	4.81	1.05	Isobutanol (F005)	5.00	5.00	Tetrachloroethylene (F001,F002)	0.05	0.079
Carbon Tetrachloride (F001)	0.96	0.05	Methanol (F003)	0.75	0.25	Toluene (F005)	0.33	1.12
Chlorobenzene (F002)	0.05	0.15	Methylene chloride (F001,F002)	0.96	0.20	1,1,1-Trichloroethane (F001,F002)	0.41	1.05
Cresols(and cresylic acid) (F004)	0.75	2.82	Methylene chloride (from pharmaceutical industry) (F001,F002,F003,F004,F005)	0.96	268.43(a) or 0.44	1,1,2-Trichloro-1, 2,2-Trifluoroethane (F002)	0.96	1.05
Cyclohexanone (F003)	0.75	0.125	Methyl ethyl ketone (F005)	0.75	0.05	Trichloroethylene (F001,F002)	0.091	0.062
1,2-Dichlorobenzene (F002)	0.125	0.65	Methyl isobutyl ketone (F002)	0.33	0.05	Trichlorofluoromethane (F002)	0.96	0.05
Ethyl acetate (F003)	0.75	0.05	Nitrobenzene (F004)	0.125	0.66	Xylene (F003)	0.15	0.05
Benzene (F005)	0.07	3.7	2-Ethoxyethanol-(also called ethylene glycol monoethyl ether) (F005)	INCIN or 81006	INCIN	1,1,2-Trichloroethane (F002)	0.03	0.06

WASTEWATER (WW) AND NON-WASTEWATER (NWW) DEFINITIONS

In most cases a wastewater (WW) is defined as having less than 1% total suspended (or filterable) solids (TSS), AND less than 1% T (Total Organic Compounds).

The requirement for less than 1% suspended solids does not apply to F001, F002, F003, F004, and F005 wastewaters, therefore if the Solvent waste has a TOC concentration of 1% or greater, it's a non-wastewater (NWW).

Any waste that does not meet the applicable definition of wastewater is a non-wastewater.

USEPA HAZARDOUS WASTE NUMBERS AND SUBCATEGORIES

D001: Ignitage Liquids Wastewaters (<1% TOC), Ignitable Liquids Low TOC NWW (<10% but >1% TOC), Ignitable Liquids High TOC NWW (≥1 TOC), Ignitable Compressed Gas, Ignitable Reactive, or Oxidizer;

D002: Acid (pH≤2.0), Alkaline (pH>12.5), or Other Corrosive (Corrosive to SAE 1020 steel at a rate ≥ 0.25 inch/year);

D003: Reactive Cyanide, Reactive Sulfide, Water Reactive, Explosive, or Other Reactive;

D006: Cadmium or Cadmium Batteries;

D008: Lead or Lead Acid Batteries;

D009: High Mercury (≥ 260ppm), High Mercury (≥ 260ppm) with organics, or Low Mercury (< 260ppm);

F001 - F005: Pharmaceutical or NonPharmaceutical. Applies only to F-Solvent wastewaters containing methylene chloride.

P065: Low Hg (< 260ppm) residues from RMERC, Low Hg residues from INCIN of Hg, High Hg (≥ 260ppm) residues from INCIN or REMERC, High Hg (≥ 260ppm);

P092: Low Hg (< 260ppm) residues from RMERC, Low Hg residues from INCIN of Hg, High Hg (≥ 260ppm) residues from INCIN or REMERC, High Hg (≥ 260ppm);

U151: High Mercury (≥ 260ppm), Low Mercury (<260ppm), or Low Mercury (<260ppm) residues from RMERC.

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's U.S. EPA ID No. | Manifest Document No. 9101 1 | 2. Page 2 | Information in the shaded areas is not required by Federal law.

State Manifest Document Number **NJA 1150348**

Generator's Name and Mailing Address: [illegible] NJ 07080

Generator's Phone: 908 [illegible]

Transporter 1 Company Name: MORLO, INC. | U.S. EPA ID Number

Transporter 2 Company Name | U.S. EPA ID Number

Designated Facility Name and Site Address: ECOLFLO, INC. 1730 PATTERSON ST. GREENSBORO, NC 27407 | U.S. EPA ID Number NC D 1918 010 4

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (919) 855-7925

E. State Trans. ID NJDEP 15-8754

D. Transporter's Phone (908) 355-7925

SAME

9. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	10. Containers No.	Type	11. Total Quantity	12. Unit Wt/Vol	13. Waste No.
a. X WASTE FLAMMABLE LIQUID, NOS (CYCLO-HEXANONE, METHYL ETHYL KETONE) FLAMMABLE LIQUID UN 1993	XX2	DF	XX130	P	F003 F005
b. X WASTE WATER REACTIVE SOLID NOS (TITANIUM HYDRIDE) FLAMMABLE SOLID UN 2813	XX1	DF	XXX10	P	D001 D003
c. X WASTE TITANIUM METAL POWDER, WET WITH 20% OR MORE WATER FLAMMABLE SOLID UN 1352	XX1	DF	XXX10	P	[illegible]
d. X WASTE ZIRCONIUM METAL FLAMMABLE SOLID UN 1358	XX9	DF	XX360	P	D001

J. Additional Descriptions for Materials Listed Above

a. LAB-PACK, SEE INVENTORIES 4,I

c. LAB-PACK, SEE INVENTORY S,I

b. LAB-PACK, SEE INVENTORY S,I

d. LAB-PACK, SEE INVENTORIES S,I

K. Handling Codes for Wastes Listed Above

a. | b. | c. | d.

15. Special Handling Instructions and Additional Information: * DECAL #: 61451 ABOVE WEIGHTS APPROXIMATE (1A-D) ST00001-1962, 1BPU-LAB DB#1-1355

EMERGENCY CONTACT # (908) 561-1100

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JAMES PERIA | Signature | Month Day Year 10 29 91

17. Transporter 1 Acknowledgment of Receipt of Materials: Printed/Typed Name: DANIEL CAMPBELL | Signature | Month Day Year 10 29 91

18. Transporter 2 Acknowledgment of Receipt of Materials: Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space: Section 18 - 2nd driver for transporter 1 - signed in error

139

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19

Printed/Typed Name | Signature | Month Day Year

NJA 1150348

EPA Form 8700-22 (Rev. 3-88) Previous editions are obsolete.

UNIFORM HAZARDOUS WASTE MANIFEST
(Continuation Sheet)

21. Generator's US EPA ID No. N.J.D.0.0.2.1.9.5.3.0.3 — Manifest Document No. 91011

22. Page 2 of 2

Information in the shaded areas is not required by Federal law.

23. Generator's Name: METZ METALLURGICAL

L. State Manifest Document Number: WA1150348

M. State Generator's ID: SAME

24. Transporter 1 Company Name: ECOFLO, INC.

25. US EPA ID Number: N.C.D.9.8.0.8.4.2.1.3.2

N. State Transporter's ID: WDEPS-874

O. Transporter's Phone: (919) 855-7935

26. Transporter ____ Company Name

27. US EPA ID Number

P. State Transporter's ID

Q. Transporter's Phone

28. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	29. Containers No	Type	30. Total Quantity	31. Unit Wt/Vol	Waste No.
a. X WASTE FLAMMABLE SOLID, NOS (ZIRCONIUM METAL) FLAMMABLE SOLID UN 1325	xx2	DF	xxx20	P	D001
b. LAB-PACKED CHEMICALS NONE NONE	xx1	DF	xxx90	P	X850
c. ~~NON-HAZARDOUS LIQUID WASTE NOS (OIL)~~ ~~NONE~~ ~~NONE~~ ~~1BQU-008~~ JB JB	~~xx3~~	~~DM~~	~~x1200~~	~~P~~	
d. ~~NON HAZARDOUS SOLID WASTE, NOS (OIL)~~ JB ~~NONE~~ ~~NONE~~ ~~1BQU-012~~ JB	~~xx2~~	~~DM~~	~~xx600~~	~~P~~	
e. NEW JERSEY PETROLEUM NONE NONE 1BQU-008	xx3	DM	x1200	P	
f. NEW JERSEY PETROLEUM, SOLIDS NONE NONE 1BQU-012	xx2	DM	x x600	P	X725
g.					
h.					
i.					

S. Additional Descriptions for Materials Listed Above
28 A-B) LAB-PACK, SEE INVENTORIES
28A) S, I 28E) OIL-98%, GREASE-2%, L, N/H
28B) L, N/H 28F) WOOD, DEBRIS-98%, OIL-2%, S, N/H

T. Handling Codes for Wastes Listed Above

32. Special Handling Instructions and Additional Information *DECAL #61451 ABOVE WEIGHTS APPROXIMATE JOB#1-1355
28A-B) ST00001-1962, 1BQU-LAB
28e) 12ECO-002
28F) PW015324180T

GENERATOR

33. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: DANIEL CAMPBELL Signature: Daniel Campbell Date: Month 10 Day 29 Year 91

34. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Julie Newman Signature: Julie Newman Date: Month 11 Day 04 Year 91

TRANSPORTER

35. Discrepancy Indication Space

FACILITY

140

ECOFLO

8520-M Corridor Road
Savage, Maryland 20763
(301) 498-4550

2750 Patterson Street
Greensboro, NC 27407
(919) 855-7925

NOTIFICATION OF ACKNOWLEDGEMENT

GENERATOR Metz Metallurgical

As a requirement of 40 CFR 264.12 (b) this letter also serves to inform you that this facility has the proper permits and will accept your shipment (as determined in the approved waste profile submitted for this waste).

141

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
[illegible] Hanton, [illegible]

[illegible] Expires 9-30-[illegible]

[illegible] MANIFEST

[illegible] Number

NJA 0937213

[illegible] DEP [illegible] 875 [illegible]
(919) 855-7925

[illegible] (919) 855-7925

				Unit Vol	I. Waste No
X	[illegible]	[illegible]	[illegible]	P	D009

[illegible] Listed Above

[illegible]

[illegible]

[illegible] have determined to be [illegible] present and [illegible] generator and select

[illegible] Month Day Year 09 06 91

[illegible] Month Day Year 09 05 91

142

[illegible] Facility Owner or Operator Certification [illegible]

Printed/Typed Name | Signature | Month Day Year

[illegible]

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJ0002195377 Manifest Document No.
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
DECOSSAIMETS METALLURGICAL
3700 S. CLINTON AVE. S. PLAINFIELD NJ
4. Generator's Phone (908) 561-1100

A. State Manifest Document Number NJA 0937213
B. State Generator's ID SA 1[illegible]

5. Transporter 1 Company Name
ECOFEO, INC.
6. US EPA ID Number MCD980842132
C. State Trans. ID NJDEP 5-[illegible]
7. Transporter 2 Company Name
8. US EPA ID Number
D. Transporter's Phone (919) [illegible]
9. Designated Facility Name and Site Address
ECOFEO INC
2750 PATTERSON ST.
GREENSBORO NC 27407
10. US EPA ID Number MCD980842132
E. State Trans. ID
F. Transporter's Phone ( )
G. State Facility's ID
H. Facility's Phone (919) 855-7[illegible]

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a.	X WASTE POISONOUS SOLID NOS (MERCURY) 2 NRQ 1193 AV-LOW (26)	X	DF	210	P	D009
b.						
c.						
d.						

Handling Codes for Wastes Listed Above

[illegible] Special Handling Instructions and Additional Information AIR WASTE APPROVAL [illegible] 142

[illegible] 451 [illegible] FACILITY CONTACT #: (905) 424-9200

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name JAMES J. BARTO | Signature | Month Day Year [illegible]

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name ROYNE [illegible] | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

FACILITY

Discrepancy Indication Space

143

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name | Signature | Month Day Year

NJA 0937213

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

ECOFLO LAND DISPOSAL RESTRICTIONS NOTIFICATION AND CERTIFICATION FORM

erator Name: DEGUSSA/METZ METALLURGICAL Manifest Doc. No.: 91011

erator USEPA ID No. NJD002195303 State Manifest No.: NJA 0937213

m is submitted to ECO FLO INC. in accordance with 40 CFR Part 268.

TION I. IDENTIFICATION OF THE WASTE

ave identified my waste and provided the appropriate information below to indicate how my waste must be managed to conform to the land sposal restrictions.

Identify all USEPA hazardous waste codes that apply to this waste shipment in the spaces provided below. For each waste code, chec the appropriate Treatability Group, Non-WasteWater (NWW) or WasteWater, in Column 2; enter the appropriate Subcategory, if applicable, in Column 3 and also enter Inorganic Solid Debris (ISD) or Soil and Debris (S&D) in Column 3 if the waste is eligible for a varianc under one of these subcategories; in Column 4, check the regulatory reference where the appropriate treatment standard(s) may b found; and, in Column 5, reference the appropriate paragraph(s) from Section II of this page and if the waste is the subject of a variance, enter "C," and the variance expiration date.

If the waste is a California List waste or a spent solvent (F001-F005), complete the boxes below appropriately. ALSO, for Californi List waste, check the spaces in Table 2 indicating which California List parameter(s) is exceeded and for F001-F005 solvents, circl the appropriate F-code(s) in Table 3.

Check here if using a continuation sheet.

1. HAZARDOUS WASTE CODE(S)	2. TREATABILITY GROUP		3. SUBCATEGORY (Enter Appropriate Subcategory If Applicable. And If The Waste Is Inorganic Solid Debris (ISD) Or Soil And Debris (S&D) Subject To A Variance, Enter These Subcategories As Appropriate)	4. APPLICABLE TREATMENT STANDARDS (Check As Applicable)			5. HOW MUST THE WASTE BE MANAGED? (Reference Section II Paragraph Or Variance Date If Applicable)
	2.a. NWW	2.b. WW		4.a. Performance Based		4.b. Specified Technology	
				268.41(a)	268.43(a)	268.42	
D009	X		HIGH MERCURY (≥ 260 PPM)				C 5-8-92

CTION II. HOW MUST THE WASTE BE MANAGED?

1 THIS RESTRICTED WASTE REQUIRES TREATMENT TO A PERFORMANCE STANDARD
This waste must be treated to the applicable performance based treatment standard set forth in 40 CFR Part 268 Subpart D, 268.32 or RCRA Section 3004(d) prior to land disposal.

2 THIS RESTRICTED WASTE REQUIRES TREATMENT BY A SPECIFIED TECHNOLOGY
This waste must be treated by a specified technology or technologies set forth in 40 CFR Part 268.42. The corresponding technology codes are listed on pages 2 and 3 of this Form.

1 THIS RESTRICTED WASTE HAS BEEN TREATED TO THE PERFORMANCE STANDARDS
"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operations of the treatment process used to support this certification and that, based upon my inquiry of those individuals immediately responsi for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the performance levels specified in 40 CFR Part 268 Subpart D and all applicable prohibitions set forth in 40 CFR 268.32 or RC Section 3004(d) without dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment."

2 THIS RESTRICTED WASTE, FOR WHICH THE TREATMENT STANDARD IS EXPRESSED AS A SPECIFIED TECHNOLOGY, HAS BEEN TREATED BY THE SPECIFIE TECHNOLOGY
"I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.42. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

THIS RESTRICTED WASTE IS SUBJECT TO A VARIANCE
The waste identified above is subject to a national capacity variance, a treatability variance, or a case-by-case extension which expires on the date identified in Column 5 above. Treatment standards for the waste(s) are set fourth at 40 CFR Part 268.41(a 268.42, 268.43(a), 268.32 or RCRA Section 3004(d). All technology specified treatment standards and the corresponding HW numbers are on Pages 2 & 3 of this Form.

THIS RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT
I have determined that the waste meets all applicable treatment standards set forth in 40 CFR Part 268 Subpart D, and all applicable prohibition levels set forth in Section 268.32 or RCRA Section 3004(d) and therefore, can be land disposed without further treatme A copy of all applicable treatment standards and specified treatment methods is maintained at the treatment storage and disposal facility named above. "I certify under penalty of law that I personally have examined and am familiar with the waste through analy and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D and all applicable prohibitions set forth on 40 CFR 268.32 or RCRA Section 3004(d). I belie that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting false certifications including the possibility of a fine and imprisonment."

hereby certify that all information submitted in this and all associated documents is complete and accurate to the best of my knowledg and information.

144

Signature [signature] Title ENV CON SUPV. Date 09/06/91

ECOFLO

8520-M Corridor Road
Savage, Maryland 20763
(301) 498-4550

2750 Patterson Street
Greensboro, NC 27407
(919) 855-7925

NOTIFICATION OF ACKNOWLEDGEMENT

GENERATOR Degussa/Metz Metallurgical

As a requirement of 40 CFR 264.12 (b) this letter also serves to inform you that this facility has the proper permits and will accept your shipment (as determined in the approved waste profile submitted for this waste).

145

REFERENCE PAGE

'able 2 - CALIFORNIA LISTED WASTE

'A Waste Numbers: _____

_____ 1) pH≤2.0 _____ 2) Liquid PCB≥50ppm (INCIN) _____ 3) Non-liquid HOC's ≥1000

_____ 4) Halogenated organic carbon (HOC's) ≥1000 mg/L(INCIN)

_____ 5) Liquids or any free liquids associated with any solid or sludge, containing the following metals or compounds of these metals:

_____Arsenic(As)≥500 mg/l _____Cadmium(Cd)≥100 mg/l

_____Lead(Pb)≥500 mg/l _____Chromium(CrVI)≥500 mg/l

_____Mercury(Hg)≥20 mg/l _____Free Cyanides ≥1000 mg/l

_____Nickel(Ni)≥134 mg/l _____Selenium(Se)≥100 mg/l

_____Thalium(Ti)≥130 mg/l

'ABLE 3 - F001, F002, F003, F004, F005 SOLVENTS

:rcle the appropriate F-Solvent Code(s) above and for North Carolina generators, circle the MCF specific constituent(s) below.

CONSTITUENT	NWW	WW	CONSTITUENT	NWW	WW	CONSTITUENT	NWW	WW
Acetone (F003)	0.59	0.05	Ethylbenzene (F003)	0.053	0.05	2-Nitropropane (F005)	250.42	INCIN
n-butyl Alcohol (F003)	5.00	5.00	Ethyl ether (F003)	0.75	0.05	Pyridine (F005)	0.33	1.12
Carbon Disulfide (F005)	4.01	1.05	Isobutanol (F005)	5.00	5.00	Tetrachloroethylene (F001,F002)	0.05	0.079
Carbon Tetrachloride (F001)	0.96	0.05	Methanol (F003)	0.75	0.25	Toluene (F005)	0.33	1.12
[illegible]benzene (F002)	0.05	0.15	Methylene chloride (F001,F002)	0.96	0.20	1,1,1-Trichloroethane (F001,F002)	0.41	1.05
[illegible](and cresylic acid) (F004)	0.75	2.02	Methylene chloride (from pharmaceutical industry) (F001,F002,F003,F004,F005)	0.96	250.43(a) or 0.44	1,1,2-Trichloro-1, 2,2-Trifluoroethane (F002)	0.96	1.05
Cyclohexanone (F003)	0.75	0.125	Methyl ethyl ketone (F005)	0.75	0.05	Trichloroethylene (F001,F002)	0.001	0.002
1,2-Dichlorobenzene (F002)	0.125	0.05	Methyl isobutyl ketone (F003)	0.33	0.05	Trichlorofluoromethane (F002)	0.96	0.05
Ethyl acetate (F003)	0.75	0.05	Nitrobenzene (F004)	0.125	0.05	Xylene (F003)	0.15	0.05
Hexane (F005)	0.07	3.7	2-Ethoxyethanol-(also called ethylene glycol monoethyl ether) (F005)	INCIN or 0.1005	INCIN	1,1,2-Trichloroethane (F002)	0.05	0.05

ASTEWATER (WW) AND NON-WASTEWATER (NWW) DEFINITIONS

n most cases a wastewater (WW) is defined as having less than 1% total suspended (or filterable) solids (TSS), AND less than 1% TOC 'otal Organic Compounds).

ne requirement for less than 1% suspended solids does not apply to F001, F002, F003, F004, and F005 wastewaters, therefore if the F-:lvent waste has a TOC concentration of 1% or greater, it's a non-wastewater (NWW).

ny waste that does not meet the applicable definition of wastewater is a non-wastewater.

:EPA HAZARDOUS WASTE NUMBERS AND SUBCATEGORIES

)01: Ignitage Liquids Wastewaters (<1% TOC), Ignitable Liquids Low TOC NWW (<10% but >1% TOC), Ignitable Liquids High TOC NWW (≥10% TOC), Ignitable Compressed Gas, Ignitable Reactive, or Oxidizer;

)02: Acid (pH≤2.0), Alkaline (pH>12.5), or Other Corrosive (Corrosive to SAE 1020 steel at a rate ≥ 0.25 inch/year);

)03: Reactive Cyanide, Reactive Sulfide, Water Reactive, Explosive, or Other Reactive;

)06: Cadmium or Cadmium Batteries;

)08: Lead or Lead Acid Batteries;

)09: High Mercury (≥ 260ppm), High Mercury (≥ 260ppm) with organics, or Low Mercury (< 260ppm);

)01 - F005: Pharmaceutical or NonPharmaceutical. Applies only to F-Solvent wastewaters containing methylene chloride.

55: Low Hg (< 260ppm) residues from RMERC, Low hg residues from INCIN of Hg, High Hg (≥ 260ppm) residues from INCIN or REMERC, or High Hg (≥ 260ppm);

92: Low Hg (< 260ppm) residues from RMERC, Low Hg residues from INCIN of Hg, High Hg (≥ 260ppm) residues from INCIN or REMERC, or High Hg (≥ 260ppm);

.51: High Mercury (≥ 260ppm), Low Mercury (<260ppm), or Low Mercury (<260ppm) residues from RMERC.

FACILITY IDENTIFICATION AND SITE LOCATION

PART 2
CHEMICAL INVENTORY

0 2 9 0 6 7 0 0 0 0 0
DEGUSSA CORPORATION
3900 SOUTH CLINTON AVE., S. PLAINFIELD

REPORTING PERIOD: JANUARY 1 - DECEMBER 31, 1991

141

CHEMICAL DESCRIPTION	HAZARDS	INVENTORY	STORAGE CODE AND LOCATION
SUBSTANCE Zinc CAS No. 7440-66-6 DOT No. 1436 Substance No. 2021 Percent 60 State S	70, , , , ,	Max. Daily 12 Avg. Daily 11 Days Onsite 365	Container 46 Conditions 01, 04 Locations Bldg. A-1ST. Floor EMI ;Bldg. C-2ND. Floor Anal. Lab
SUBSTANCE Zinc Acetate CAS No. 557-34-6 DOT No. 9153 Substance No. 2022 Percent 60 State S	66, , , , ,	Max. Daily 10 Avg. Daily 10 Days Onsite 365	Container 38 Conditions 01, 04 Locations Bldg. A-2ND. Floor R&I
SUBSTANCE Zinc Chloride CAS No. 7646-85-7 DOT No. 2331 Substance No. 2030 Percent 59 State S	66, 67, 68, , ,	Max. Daily 12 Avg. Daily 11 Days Onsite 365	Container 38 Conditions 01, 04 Locations Bldg. A-2ND. Floor R&I , Refining PM
SUBSTANCE Zinc Nitrate CAS No. 7779-88-6 DOT No. 1514 Substance No. 2036 Percent 60 State S	66, 67, 68, 70, ,	Max. Daily 10 Avg. Daily 10 Days Onsite 365	Container 38 Conditions 01, 04 Locations Bldg. A-2ND. Floor R&I ;Bldg. C-2ND. Floor Anal. Lab
SUBSTANCE Zinc Sulfate CAS No. 7733-02-0 DOT No. 9161 Substance No. 2044 Percent 59 State S	66, , , , ,	Max. Daily 10 Avg. Daily 10 Days Onsite 365	Container 38 Conditions 01, 04 Locations Bldg. A-2ND. Floor R&I
SUBSTANCE Zirconium Nitrate CAS No. 13746-89-9 DOT No. 2728 Substance No. 2049 Percent 60 State S	66, 68, , , ,	Max. Daily 10 Avg. Daily 10 Days Onsite 365	Container 39 Conditions 01, 04 Locations Bldg. A-2ND. Floor R&I ;Bldg. C-2ND. Floor Anal. Lab
SUBSTANCE CAS No. - - DOT No. Substance No. Percent State	, , , , ,	Max. Daily Avg. Daily Days Onsite	Container Conditions Locations

NH-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MAGUSSA CORPORATION
3900 S. CLINTON AVE S. PLAINFIELD, NJ 07080

4. Generator's Phone (908) 561-1100

A. State Manifest Document Number: NJA 123062

B. State Generator's ID

5. Transporter 1 Company Name: ECOFLO, INC. | 6. US EPA ID Number

C. State Trans. ID

7. Transporter 2 Company Name | 8. US EPA ID Number

D. Transporter's Phone ( )

9. Designated Facility Name and Site Address | 10. US EPA ID Number
ECOFLO, INC.
2750 PATTERSON ST. GREENSBORO, NC 27407
NCD 980842132

E. State Trans. ID

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone ( )

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. X RQ HAZARDOUS SUBSTANCE LIQUID NOS (PCB) OIL-FILLED EQUIPMENT	X	XX		K
b.				
c.				
d.				

J. Additional Descriptions for Materials Listed Above
a. b. c. d.

K. Handling Codes for Wastes Listed Above
a. b. c. d.

15. Special Handling Instructions and Additional Information
A) 86659
DETAIL

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: James J Pavlo | Signature | Month 04 Day 21 Year 92

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space
148

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name | Signature | Month Day Year

GENERATOR — TRANSPORTER — FACILITY

NJA 123062

EPA Form 8700-22 (Rev. 9/86) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

HW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
NEGUSSA/ALTE METALLURGICAL
3900 S. CLINTON AVE. S. PLAINFIELD, NJ. 07080

4. Generator's Phone (201) 561-1100

A. State Manifest Document Number
NJA 0037250

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number
ECOFLO, INC.

C. State Trans. ID NJDEP5187

7. Transporter 2 Company Name | 8. US EPA ID Number

D. Transporter's Phone (919) 855-7925

E. State Trans. ID

9. Designated Facility Name and Site Address | 10. US EPA ID Number
ECOFLO, INC.
2750 PATTERSON ST GREENSBORO, NC. 27407
NCD982042132

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (919 855-7925

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	Waste Flammable liquid corrosive, N.O.S. (Boron trichloride) Flammable liquid UN2924 IB51 Lab	X	XX1	DF XXX110	P	D001
b.	X	Waste Flammable liquid N.O.S. (Toluene) Flammable liquid UN1993 IBQ1 Lab	X	XX1	DF XXX40	P	D001
c.	X	Waste Water Reactive solid N.O.S. (Zinc) Flammable solid UN2813 IBQ1 Lab	X	XX1	DF XXX110	P	D001
d.	X	Waste Oxidizer, N.O.S. (Cupric nitrate) Oxidizer UN1479	X	XX1	DF XXX110	P	D001

J. Additional Descriptions for Materials Listed Above
See Attached Drum Inventory
a. [illegible] c. RS
b. Sheets for further info. d.

K. Handling Codes for Wastes Listed Above
a. | c.
b. | d.

15. Special Handling Instructions and Additional Information
N-d J ST-00001 [illegible] 61451 [illegible]
All wastes [illegible] Emergency contact #(201) 561-1100

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
JAMES [illegible]	[illegible]	01 [illegible] 91

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Curt Windmiller	[illegible]	01 15 91

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space
149

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year

GENERATOR — TRANSPORTER — FACILITY

NJA093[illegible]

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

UNIFORM HAZARDOUS WASTE MANIFEST
(Continuation Sheet)

21. Generator's US EPA ID No.: NJB0021953039
Manifest Document No.: 910022
22. Page: 2 of 2

23. Generator's Name
DEGUSSA/METZ METALLURGICAL
3900 S. CLINTON AVE S. PLAINFIELD, NJ. 07080

24. Transporter ___ Company Name: ECOFLO, INC.
25. US EPA ID Number: NCD9808621 3
N. State Transporter
O. Transport
P. State

26. Transporter ___ Company Name
27. US EPA ID Number

28. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	29. Containers No	Type	30. Total Quantity	31. Unit Wt/Vol
a. Waste Flammable solid, N.O.S (Carbon Black Aluminum powder) Flammable solid UN1325 1BQU-Lab	X	X XX2	DF	X XX80	P
b. Waste Acid liquid, N.O.S (Vanadium Oxytrichloride) Corrosive material NA1760 1BQU-Lab	X	X XX1	DF	XXX40	P
c. Waste Alkaline liquid, N.O.S (Triethanolamine) Corrosive material NA1719 1BQU-Lab	X	X XX1	DF	XXX40	P
d. Waste Poison B liquid, N.O.S (Nitrobenzene Cadmium) Poison B UN2810 1BQU-Lab	X	X XX3	DF	XXX80	P
e.					
f.					
g.					
h.					
i.					

GENERATOR

9. Additional Descriptions for Materials Listed Above
a-d) See Attached Drum Tracking Logs

32. Special Handling Instructions and Additional Information
a-d) ST-00001-1962
d-also ★-D007
Job #1-1023

All weights are approx.

TRANSPORTER

33. Transporter ___ Acknowledgement of Receipt of Materials
Printed/Typed Name: Curt Windmiller
Signature: [signature]
Date: Month 01 Day 30 Year 09

34. Transporter ___ Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

150

35. Discrepancy Indication Space

ECOFLO

LAND DISPOSAL RESTRICTIONS NOTIFICATION AND CERTIFICATION FOR APPENDIX IV LAB PACKS

Generator Name DEGUSSA/METZ METALURGICAL Manifest Doc. No. 91002
EPA/State ID Number NJD002195303 State Man. Doc. No. NJA0937256
This form is submitted to ECOFLO, INC in accordance with 40 CFR Part 268, which restricts the land disposal of certain hazardous wastes.

APPENDIX IV LAB PACKS

I am the generator of a lab pack that contains wastes identified in Appendix IV to Part 268. The appropriate treatment standards are established in 268.42 (Incineration followed by treatment of the residue in compliance with the applicable D-code treatment standards in Subpart D). The following EPA hazardous waste number(s) are included in this shipment:

D001						
D002						
D003						
D007						
D006.						

___ Check here if using a continuation sheet(s).

The following is a list of container(s), by drum number, that are affected by this certification:

97808	97814					
97810	97815					
97811	97817					
97812	97818					
97813						

___ Check here if using a continuation sheet(s).

"I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack contains only the wastes specified in Appendix IV to Part 268 or solid wastes not subject to regulation under Part 261. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

Authorized Signature James J Bruna Date 01/30/91

REFERENCE PAGE

TABLE 2 - CALIFORNIA LISTED WASTE

Waste Numbers: _____

_____ 1) pH≤2.0 _____ 2) PCB≥50ppm(INCIN or FSUBS) _____ 3) Halogenated organic carbon, (HOC's)≥1000 mg/l(INCIN or FSUBS)

_____ 4) Liquids or any free liquids associated with any solid or sludge, containing the following metals or compounds of these metals:

_____Arsenic(As)≥500 mg/l _____Cadmium(Cd)≥100 mg/l

_____Lead(Pb)≥500 mg/l _____Chromium(CrVI)≥500 mg/l

_____Mercury(Hg)≥20 mg/l _____Free Cyanides ≥1000 mg/l

_____Nickel(Ni)≥134 mg/l _____Selenium(Se)≥100 mg/l

_____Thalium(Ti)≥130 mg/l

TABLE 3 - F001, F002, F003, F004, F005 SOLVENTS

Circle the appropriate F-Solvent Code(s) above and for North Carolina generators, circle the MCF specific constituent(s) below.

CONSTITUENT	NWW	WW	CONSTITUENT	NWW	WW	CONSTITUENT	NWW	WW
Acetone (F003)	0.52	0.05	Ethylbenzene (F003)	0.053	0.05	2-Nitrobenzene (F005)	[illegible]	[illegible]
n-Butyl Alcohol (F003)	5.00	5.00	Ethyl ether (F003)	0.75	0.05	Pyridine (F005)	[illegible]	[illegible]
Carbon Disulfide (F005)	4.81	1.05	Isobutanol (F005)	5.00	5.00	Tetrachloroethylene (F001,F002)	[illegible]	[illegible]
Carbon Tetrachloride (F001)	0.96	0.05	Methanol (F005)	0.75	0.25	Toluene (F005)	[illegible]	[illegible]
Chlorobenzene (F002)	0.05	0.15	Methylene chloride (F001,F002)	0.96	0.20	1,1,1-Trichloroethane (F001,F002)	0.41	1.05
Cresols(and cresylic acid) (F004)	0.75	2.82	Methylene chloride (from pharmaceutical industry) (F001,F002,F003,F004,F005)	0.96	261.03(a) or 0.44	1,1,2-Trichloro-1, 2,2-Trifluoroethane (F002)	0.96	1.05
Cyclohexanone (F003)	0.75	0.125	Methyl ethyl ketone (F005)	0.75	0.05	Trichloroethylene (F001,F002)	0.001	0.062
1,2-Dichlorobenzene (F002)	0.125	0.05	Methyl isobutyl ketone (F003)	0.33	0.05	Trichlorofluoromethane (F002)	0.96	0.05
Ethyl acetate (F003)	0.75	0.05	Nitrobenzene (F004)	0.125	0.05	Xylene (F005)	0.15	[illegible]
Benzene (F005)	0.07	3.7	2-Ethoxyethanol-(also called ethylene glycol monoethyl ether) (F005)	INCIN or RNWW	INCIN	1,1,2-Trichloroethane (F002)	[illegible]	[illegible]

WASTEWATER (WW) AND NON-WASTEWATER (NWW) DEFINITIONS

In most cases a wastewater (WW) is defined as having less than 1% total suspended (or filterable) solids (TSS), AND less than 1% TO (Total Organic Compounds).

The requirement for less than 1% suspended solids does not apply to F001, F002, F003, F004, and F005 wastewaters, therefore if the F Solvent waste has a TOC concentration of 1% or greater, it's a non-wastewater (NWW).

Any waste that does not meet the applicable definition of wastewater is a nonwastewater.

USEPA HAZARDOUS WASTE NUMBERS AND SUBCATEGORIES

D001: Ignitage Liquids Wastewaters (<1% TOC), Ignitable Liquids Low TOC NWW (<10% but >1% TOC), Ignitable Liquids High TOC NWW (≥1(TOC), Ignitable Compressed Gas, Ignitable Reactive, or Oxidizer;

D002: Acid (pH≤2.0), Alkaline (pH>12.5), or Other Corrosive (Corrosive to SAE 1020 steel at a rate ≥ 0.25 inch/year);

D003: Reactive Cyanide, Reactive Sulfide, Water Reactive, Explosive, or Other Reactive;

D006: Cadmium or Cadmium Batteries;

D008: Lead or Lead Acid Batteries;

D009: High Mercury (≥ 260ppm), High Mercury (≥ 260ppm) with organics, or Low Mercury (< 260ppm);

F001, F002, F003, F004, F005: Pharmaceutical, or NonPharmaceutical;

F065: Low Hg (< 260ppm) residues from RMERC, Low Hg residues from INCIN of Hg, High Hg (≥ 260ppm) residues from INCIN or REMERC, High Hg (≥ 260ppm);

F092: Low Hg (< 260ppm) residues from RMERC, Low Hg residues from INCIN of Hg, High Hg (≥ 260ppm) residues [illegible] High Hg (≥ 260ppm);

U151: High Mercury (≥ 260ppm), Low Mercury (<260ppm), or Low Mercury (<260ppm) residues from RMERC.

ECOFLO

Generator Name: DEGUSSA/METZ METALLURGICAL

Manifest Doc. No.: 91002

ECOFLO MCF Number: 1BQU-LAB

State Manifest No.: NJA0937256

form is submitted to ECOFLO, INC. in accordance with 40 CFR Part 268.

SECTION I. IDENTIFICATION OF THE WASTE

I have identified my waste and provided the appropriate information below to indicate how my waste must be managed to conform to the land disposal restrictions.

A. Identify all USEPA hazardous waste codes that apply to this waste shipment in the spaces provided below. For each waste code, check the appropriate Treatability Group, Non-WasteWater (NWW) or WasteWater, in Column 2; enter the appropriate Subcategory, if applicable, in Column 3 and also enter Inorganic Solid Debris (ISD) or Soil and Debris (S&D) in Column 3 if the waste is eligible for a variance under one of these subcategories; in Column 4, check the regulatory reference where the appropriate treatment standard(s) may be found; and, in Column 5, reference the appropriate paragraph(s) from Section II of this page and if the waste is the subject of a variance, enter "C," and the variance expiration date.

B. If the waste is a California List waste or a spent solvent (F001-F005), complete the boxes below appropriately. ALSO, for California List waste, check the spaces in Table 2 indicating which California List parameter(s) is exceeded and for F001-F005 solvents, circle the appropriate F-code(s) in Table 3.

☐ Check here if using a continuation sheet.

REF #	1. HAZARDOUS WASTE CODE(S)	2. TREATABILITY GROUP 2.a. NWW	2.b. WW	3. SUBCATEGORY (Enter Appropriate Subcategory If Applicable. And If The Waste Is Inorganic Solid Debris (ISD) Or Soil And Debris (S&D) Subject To A Variance, Enter These Subcategories As Appropriate)	4. APPLICABLE TREATMENT STANDARDS (Check As Applicable) 4.a. Performance Based 268.41(a)	268.43(a)	4.b. Specified Technology 268.42	5. HOW MUST THE WASTE BE MANAGED? (Reference Section II, Paragraph Which Applies To Waste In Column 5)
1	F005	✓		None	✓			A.1
2	D001	✓		Ignitable Liquid/High TOC			✓	A.1
3	U169	✓		None		✓		A.1
4								
5								
6								
7								
8								
9								
10								

SECTION II. HOW MUST THE WASTE BE MANAGED?

A.1 THIS RESTRICTED WASTE REQUIRES TREATMENT TO A PERFORMANCE STANDARD
This waste must be treated to the applicable performance based treatment standard set forth in 40 CFR Part 268 Subpart D, 268.32 or RCRA Section 3004(d) prior to land disposal.

A.2 THIS RESTRICTED WASTE REQUIRES TREATMENT BY A SPECIFIED TECHNOLOGY
This waste must be treated by a specified technology or technologies set forth in 40 CFR Part 268.42. The corresponding technology codes are listed on pages 2 and 3 of this form.

B.1 THIS RESTRICTED WASTE HAS BEEN TREATED TO THE PERFORMANCE STANDARDS
"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operations of the treatment process used to support this certification and that based upon my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the performance levels specified in 40 CFR Part 268 Subpart D and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA Section 3004(d) without dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment."

B.2 THIS RESTRICTED WASTE, FOR WHICH THE TREATMENT STANDARD IS EXPRESSED AS A SPECIFIED TECHNOLOGY, HAS BEEN TREATED BY THE SPECIFIED TECHNOLOGY
"I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.42. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

C. RESTRICTED WASTE SUBJECT TO A VARIANCE
The waste identified above is subject to a national capacity variance, a treatability variance, or a case-by-case extension which expires on the date identified in Column 5 above. Treatment standards for the waste(s) are set forth at 40 CFR Part 268.41(a), 268.42, 268.43(a), 268.32 or RCRA Section 3004(d). All technology specified treatment standards and the corresponding tbl numbers are on Pages 2 & 3 of this form.

D. THIS RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT
I have determined that the waste meets all applicable treatment standards set forth in 40 CFR Part 268 Subpart D, and all applicable prohibition levels set forth in Section 268.32 or RCRA Section 3004(d) and therefore, can be land disposed without further treatment. A copy of all applicable treatment standards and specified treatment methods is maintained at the treatment storage and disposal facility named above. "I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA Section 3004(d). I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting false certifications including the possibility of a fine and imprisonment."

I hereby certify that all information submitted in this and all associated documents is complete and accurate to the best of my knowledge and informaton.

Signature James J. Baird Title ENV. Control Supv. Date [illegible]/9

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD098053019 Manifest Document No. 11005
2. Page 1 of 2
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
DEGUSSA/METZ METALLURGICAL
3950 S. CLINTON AVE. S. PLAINFIELD, NJ. 07080
4. Generator's Phone (201) 561-1100

A. State Manifest Document Number NJA 08[illegible]256
B. State Generator's

5. Transporter 1 Company Name
ECOFLO, INC.
6. US EPA ID Number NCD982804213

C. State Trans. ID NJDE25-80[illegible]
D. Transporter's Phone (919) 855-7925

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Trans. ID
F. Transporter's Phone ( )

9. Designated Facility Name and Site Address
ECOFLO, INC.
2750 PATTERSON ST GREENSBORO, NC. 27407
10. US EPA ID Number NCD982804213

G. State Facility's ID
H. Facility's Phone (919) 855-7925

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	
a. X	Waste Flamable liquid corrosive, N.O.S. (Benzyl trichloride, Methanol) UN2924	1	DF	XX1	10	[illegible]
b. X	Waste Flammable liquid, N.O.S. (Toluene, IS) UN1993	1	DF	XX1	40	[illegible]
c. X	Waste Water Reactive solid, N.O.S. (Zinc) UN2813	1	DF	XX1	10	[illegible]
d. X	Waste Oxidizer, N.O.S (Cupric nitrate) UN1479		DF	XX1	10	[illegible]

J. Additional Descriptions for Materials Listed Above
See Attached Drum inventory
a. b. c. d.
See Sheet's for further info

K. Handling Codes for Wastes Listed Above
a. b. c. d.

15. Special Handling Instructions and Additional Information
a-d) ST-OC001-1962 Decal# 61454 Job# 1-1073
All weights are approx Emergency contact #(201) 561-1100

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name	Signature	Month Day Year
JAMES BARNA	James Barna	01 30 91

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Curt Windmiller	Curt Windmiller	01 30 91

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Kelly Rice	Kelly Rice	01 30 91

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete. SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES.

TOP MAIL TO GENERATOR

154

NJA 08[illegible]256

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator's US EPA ID No.: N J D 0 0 2 1 9 5 3 0 3

Manifest Document No.: 910022 of 2

23. Generator's Name

DEGUSSA/METZ METALLURGICAL
3900 S. CLINTON AVE S. PLAINFIELD, NJ. 07080

24. Transporter 1 Company Name: ECOFLO, INC.

25. US EPA ID Number: N.C.D.9.8.0.8.- 2.1.3.2

26. Transporter ___ Company Name

27. US EPA ID Number

	28. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	29. Containers No	Type	30. Total Quantity	31. Unit Wt/Vol
a.	Waste Flammable solid, N.O.S. (Carbon Black, Aluminum powder) Flammable solid UN1325 1BQU-Lab	X	XX2	DF	XXX80	P
b.	Waste Acid liquid, N.O.S. (Vanadium Oxytrichloride) Corrosive material NA1760 1BQU-Lab	X	XX1	DF	XXX40	P
c.	Waste Alkaline liquid, N.O.S. (Triethanolamine) Corrosive material NA1719 1BQU-Lab	X	XX1	DF	XXX40	P
d.	Waste Poison B liquid, N.O.S. (Nitrobenzene, Cadium) Poison B UN2810 1BQU-Lab	X	XX3	DF	XXX80	P

32. Special Handling Instructions and Additional Information

a-d.) ST-00001-1962

d-also ★-D007

Job #1023

All weights are approx.

33. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Curt Windmiller

Signature: Curt Windmiller

Date: Month Day Year: 01 30 91

34. Transporter ___ Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

35. Discrepancy Indication Space

ORIGINAL — RETURN TO GENERATOR

155

ECOFLO

8520-M Corridor Road
Savage, Maryland 20763
(301) 498-4550

2750 Patterson Street
Greensboro, NC 27407
(919) 855-7925

NOTIFICATION OF ACKNOWLEDGEMENT

GENERATOR Degussa/Metz Metallurgical

As a requirement of 40 CFR 264.12 (b), this letter also serves to inform [illegible] that this facility has the proper permits and will accept your shipment (as determined in the approved waste profile submitted for this waste).

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD025303 — Manifest Document No. 000

2. Page 1 of 2

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
DRUGUSA INTL METALLURGICAL
3400 S. CLINTON AVE. S. PLAINFIELD, NJ 07080

4. Generator's Phone (908) 561-1100

A. State Manifest Document Number: NJA 119025

B. State Generator's ID: 5000

5. Transporter 1 Company Name: ECOFLO, INC.
6. US EPA ID Number: NCD982064213

C. State Trans. ID: RIDER

7. Transporter 2 Company Name
8. US EPA ID Number

D. Transporter's Phone ( )

E. State Trans. ID

9. Designated Facility Name and Site Address
ECOFLO, INC.
2750 PATTERSON ST. GREENSBORO, NC 27407
10. US EPA ID Number: NCD982064213

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. X Waste Acid Liquid N.O.S. (nitric acid, sulfuric acid) Common Material NA 1760 IBGW-046	X	X	DF	X X 4941	G
b. X Waste Flammable Solid N.O.S. (mercury) Flammable UN 2811 IBGW-AAB	X	X	DF	X X 10	P
c. X Waste Mercury, Metallic Corrosive NA 2809 IBGW-LAB	X	X	DF	X X 10	P
d. X Waste ORM-A N.O.S. (~~[illegible]~~) ORM-A NA 9193 IBGW-013	X	X	DM	X 3711	P

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Dem 461452
c) Stainless-Steel d) Lead-Pb
b) CWMA
c) Aluminum Alloys
EMERGENCY CONTACT (201) 561-9101

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JAMES J BARNA — Signature: James J Barna — Month Day Year: 08 19 91

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: MATTHEW S. WINDMILLER — Signature: [signature] — Month Day Year: 08 19 91

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space
Item 11 C - Rejected + Returned To Generator (#158365)

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Patty Rae — Signature: Patty Rae 151 — Month Day Year: 08 21 91

In case of an emergency or spill immediately call the state the emergency occurred in and the U.S. Dept. of Environmental Protection (DEP) 24-hour hotline (609) 292-7172 (collect)

EPA Form 8700-22 (Rev. 3-88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

3 — TSD MAIL TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. [illegible]

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)	21. Generator's US EPA ID No.	Manifest Document No.	22. Page	Information in the shaded areas is not required by Federal law.
	NJD002 195303	91606	2 of 2	

23. Generator's Name

Degussa / Metz Metallurgical

24. Transporter 1 Company Name: EWF LOI Inc

25. US EPA ID Number: NJ 9408[illegible]137

N. State Transporter's ID: [illegible]

O. Transporter's Phone: [illegible]

26. Transporter ___ Company Name

27. US EPA ID Number

	28. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	29. Containers No.	Type	30. Total Quantity	31. Unit Wt/Vol
a.	Hazardous Waste Liquid N.O.S. (Urbanite) OPM-E NA 9192 1DQU-017	X	X XX1	DM	XX390	P
b.	NJ Waste Petroleum NONE NONE 1BQU-008 (A)		X XX3	DM	X 1138	P
c.						
d.						
e.						
f.						
g.						
h.						
i.						

32. Special Handling Instructions and Additional Information

a) 3ECU-531

b) 12ECU-002

33. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: MATTHEW S. WINDMILLER

Signature: [signature]

Date: Month 08 Day 17 Year 91

34. Transporter ___ Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

158

Date: Month Day Year

35. Discrepancy Indication Space

Style F16 REV-6 LABELMASTER, Div. of AMERICAN LABELMARK CO., CHICAGO

EPA Form [illegible] are obso

ECOFLO

8520-M Corridor Road
Savage, Maryland 20763
(301) 498-4550

2750 Patterson Street
Greensboro, NC 27407
(919) 855-7925

NOTIFICATION OF ACKNOWLEDGEMENT

GENERATOR Degussa/Metz Metallurgical

As a requirement of 40 CFR 264.12 (b) this letter also serves to inform you that this facility has the proper permits and will accept your shipment (as determined in the approved waste profile submitted for this waste).

159

ECOFLO LAND DISPOSAL RESTRICTIONS NOTIFICATION AND CERTIFICATION FORM

erator Name: Degussa/Metz Metallurgical Manifest Doc. No.: 91006

erator USEPA ID No. NJD 002195303 State Manifest No.: NJA 1150297

s form is submitted to Ecoflo, Inc. in accordance with 40 CFR Part 268.

TION I. IDENTIFICATION OF THE WASTE

ave identified my waste and provided the appropriate information below to indicate how my waste must be managed to conform to the land posal restrictions.

Identify all USEPA hazardous waste codes that apply to this waste shipment in the spaces provided below. For each waste code, check the appropriate Treatability Group, Non-WasteWater (NWW) or WasteWater, in Column 2; enter the appropriate Subcategory, if applicable, in Column 3 and also enter Inorganic Solid Debris (ISD) or Soil and Debris (S&D) in Column 3 if the waste is eligible for a variance under one of these subcategories; in Column 4, check the regulatory reference where the appropriate treatment standard(s) may be found; and, in Column 5, reference the appropriate paragraph(s) from Section II of this page and if the waste is the subject of a variance, enter "C," and the variance expiration date.

If the waste is a California List waste or a spent solvent (F001-F005), complete the boxes below appropriately. ALSO, for California List waste, check the spaces in Table 2 indicating which California List parameter(s) is exceeded and for F001-F005 solvents, circle the appropriate F-code(s) in Table 3.

Check here if using a continuation sheet.

1. HAZARDOUS WASTE CODE(S)	2. TREATABILITY GROUP 2.a. NWW	2.b. WW	3. SUBCATEGORY (Enter Appropriate Subcategory If Applicable. And If The Waste Is Inorganic Solid Debris (ISD) Or Soil And Debris (S&D) Subject To A Variance, Enter These Subcategories As Appropriate)	4. APPLICABLE TREATMENT STANDARDS (Check As Applicable) 4.a. Performance Based 268.41(a)	268.43(a)	4.b. Specified Technology 268.42	5. HOW MUST THE WASTE BE MANAGED? (Reference Section II Paragraph Or Variance Date If Applicable)
D002	X		Acid			X	A1
D011	X		None	X			A1
D009	X		Low Hg				C(5/19/92)
D151	X		High Hg				C(5/18/92)
F001	X		None	X			A1

CTION II. HOW MUST THE WASTE BE MANAGED?

.1 THIS RESTRICTED WASTE REQUIRES TREATMENT TO A PERFORMANCE STANDARD
This waste must be treated to the applicable performance based treatment standard set forth in 40 CFR Part 268 Subpart D, 268.32 or RCRA Section 3004(d) prior to land disposal.

.2 THIS RESTRICTED WASTE REQUIRES TREATMENT BY A SPECIFIED TECHNOLOGY
This waste must be treated by a specified technology or technologies set forth in 40 CFR Part 268.42. The corresponding technology codes are listed on pages 2 and 3 of this Form.

.1 THIS RESTRICTED WASTE HAS BEEN TREATED TO THE PERFORMANCE STANDARDS
"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operations of the treatment process used to support this certification and that based upon my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly on or to comply with the performance levels specified in 40 CFR Part 268 Subpart D and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA Section 3004(d) without dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment."

.2 THIS RESTRICTED WASTE, FOR WHICH THE TREATMENT STANDARD IS EXPRESSED AS A SPECIFIED TECHNOLOGY, HAS BEEN TREATED BY THE SPECIFIED TECHNOLOGY
"I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.42. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

. THIS RESTRICTED WASTE IS SUBJECT TO A VARIANCE
The waste identified above is subject to a national capacity variance, a treatability variance, or a case by case extension which expires on the date identified in Column 5 above. Treatment standards for the waste(s) are set forth at 40 CFR Part 268.41(a), 268.42, 268.43(a), 268.32 or RCRA Section 3004(d). All technology specified treatment standards and the corresponding HW numbers are on Pages 2 & 3 of this Form.

. THIS RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT
I have determined that the waste meets all applicable treatment standards set forth in 40 CFR Part 268 Subpart D, and all applicable prohibition levels set forth in Section 268.32 or RCRA Section 3004(d) and therefore, can be land disposed without further treatment. A copy of all applicable treatment standards and specified treatment methods is maintained at the treatment storage and disposal facility named above. "I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D and all applicable prohibitions set forth on 40 CFR 268.32 or RCRA Section 3004(d). I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting false certifications including the possibility of a fine and imprisonment."

hereby certify that all information submitted in this and all associated documents is complete and accurate to the best of my knowledge and information.

Signature [signature] Title Env Control Supv Date 06/19/91

ECOFLO - LDR Form 11/21/9

Cc

160

[illegible] CALIFORNIA LISTED WASTE

Waste Numbers: _____

_____ 1) pH≤2.0 _____ 2) Liquid PCB≥50ppm (INCIN) _____ 3) [illegible] ≥1000

_____ 4) Halogenated organic carbon (HOC's) ≥1000 mg/L(INCIN)

_____ 5) Liquids or any free liquids associated with any solid or sludge, containing the following metals or compounds of these metals:

_____ Arsenic(As)≥500 mg/l _____ Cadmium(Cd)≥100 mg/l

_____ Lead(Pb)≥500 mg/l _____ Chromium(CrVI)≥500 mg/l

_____ Mercury(Hg)≥20 mg/l _____ Free Cyanides ≥1000 mg/l

_____ Nickel(Ni)≥134 mg/l _____ Selenium(Se)≥100 mg/l

_____ Thalium(Ti)≥130 mg/l

ABLE 3 - F001, F002, F003, F004, F005 SOLVENTS

rcle the appropriate F-Solvent Code(s) above and for North Carolina generators, circle the MCF specific constituent(s) below.

CONSTITUENT	NWW	WW	CONSTITUENT	NWW	WW	CONSTITUENT	NWW	WW
Acetone (F003)	0.59	0.05	Ethylbenzene (F003)	0.002	0.15	2-Nitropropane (F005)	[illegible]	[illegible]
n-Butyl Alcohol (F003)	5.00	5.00	Ethyl ether (F003)	0.25	0.05	Pyridine (F005)	[illegible]	1.12
Carbon Disulfide (F005)	4.81	1.05	Isobutanol (F005)	5.00	5.00	Tetrachloroethylene (F001,F002)	[illegible]	[illegible]
Carbon Tetrachloride (F001)	0.90	0.05	Methanol (F003)	0.75	0.25	Toluene (F005)	[illegible]	1.12
Chlorobenzene (F002)	0.05	0.15	Methylene chloride (F001,F002)	0.96	0.20	1,1,1-Trichloroethane (F001,F002)	0.41	1.05
Cr[illegible] cresylic acid) (F004)	0.75	2.82	Methylene chloride (from pharmaceutical industry) (F001,F002,F003,F004,F005)	0.96	260.43(a) or 0.44	1,1,2-Trichloro-1, 2,2-Trifluoroethane (F002)	[illegible]	[illegible]
Cyclohexanone (F003)	0.75	0.125	Methyl ethyl ketone (F005)	0.75	0.05	Trichloroethylene (F001,F002)	[illegible]	[illegible]
1,2-Dichlorobenzene (F002)	0.125	0.05	Methyl isobutyl ketone (F003)	0.33	0.05	Trichlorofluoromethane (F002)	0.96	0.05
Ethyl acetate (F003)	0.75	0.05	Nitrobenzene (F004)	0.125	0.05	Xylene (F003)	0.15	0.05
Benzene (F005)	0.07	3.7	2-Ethoxyethanol-(also called ethylene glycol monoethyl ether) (F005)	INCIN or BTDOG	INCIN	1,1,2-Trichloroethane (F002)	[illegible]	0.05

STEWATER (WW) AND NON-WASTEWATER (NWW) DEFINITIONS

most cases a wastewater (WW) is defined as having less than 1% total suspended (or filterable) solids (TSS), AND less than 1% TOC otal Organic Compounds).

e requirement for less than 1% suspended solids does not apply to F001, F002, F003, F004, and F005 wastewaters, therefore if the F-lvent waste has a TOC concentration of 1% or greater, it's a non-wastewater (NWW).

y waste that does not meet the applicable definition of wastewater is a non-wastewater.

EPA HAZARDOUS WASTE NUMBERS AND SUBCATEGORIES

001: Ignitage Liquids Wastewaters (<1% TOC), Ignitable Liquids Low TOC NWW (<10% but >1% TOC), Ignitable Liquids High TOC NWW (≥10% TOC), Ignitable Compressed Gas, Ignitable Reactive, or Oxidizer;

002: Acid (pH≤2.0), Alkaline (pH>12.5), or Other Corrosive (Corrosive to SAE 1020 steel at a rate ≥ 0.25 inch/year);

003: Reactive Cyanide, Reactive Sulfide, Water Reactive, Explosive, or Other Reactive;

006: Cadmium or Cadmium Batteries;

008: Lead or Lead Acid Batteries;

009: High Mercury (≥ 260ppm), High Mercury (≥ 260ppm) with organics, or Low Mercury (< 260ppm);

001 - F005: Pharmaceutical or NonPharmaceutical. Applies only to F-Solvent wastewaters containing methylene chloride.

065: Low Hg (< 260ppm) residues from RMERC, Low Hg residues from INCIN of Hg, High Hg (≥ 260ppm) residues from INCIN or REMERC, or High Hg (≥ 260ppm);

092: Low Hg (< 260ppm) residues from RMERC, Low Hg residues from INCIN of Hg, High Hg (≥ 260ppm) residues from INCIN or REMERC, or High Hg (≥ 260ppm);

151: High Mercury (≥ 260ppm), Low Mercury (<260ppm), or Low Mercury (<260ppm) residues from RMERC.

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. [illegible] Manifest Document No. [illegible]
2. Page 1 of [illegible] Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
[illegible]
[illegible] CLINTON AVE. [illegible] 07086

4. Generator's Phone (90[illegible]) 561-[illegible]

A. State Manifest Document Number NJA 115[illegible]

B. State Generator's ID [illegible]

5. Transporter 1 Company Name: ECOFLO, INC.
6. US EPA ID Number: [illegible]

C. State Trans. ID [illegible]

7. Transporter 2 Company Name
8. US EPA ID Number

D. Transporter's Phone (919) [illegible]

E. State Trans. ID

9. Designated Facility Name and Site Address
ECOFLO, INC.
2750 PATTERSON ST. GREENSBORO, NC 27407
10. US EPA ID Number: NCD 980842132

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (919) [illegible]

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a.	X Waste [illegible] Material NA 1760 1BQU-016	XX1	DF	XX141	P
b.	X Waste Poison B [illegible] Poison B UN 2811 1BQU-LAB	XX1	DF	XXX10	P
c.	X Waste Mercury Metallic [illegible] NA 2809 1BQU-LAB	XX1	DF	XX1N	P
d.	X Waste ORM-A N.O.S. ([illegible]) ORM-A NA 1693 1BQU-013	XX1	DM	XX371	P

J. Additional Descriptions for Materials Listed Above
a. [illegible]
b. [illegible]
c. LIT SEZ ATTACHED DRUM INVENTORIES
d. LIT [illegible]

K. Handling Codes for Wastes Listed Above
a.
b.
c.
d.

15. Special Handling Instructions and Additional Information [illegible]

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JAMES J BAHNA
Signature: [signature]
Month Day Year: 08 1991

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: MATTHEW S [illegible]
Signature: [signature]
Month Day Year: 08 1991

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
162
Month Day Year

GENERATOR

TRANSPORTER

FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection

NJA 115025

EPA Form 8700-22 (Rev. 9/86) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

AUG 12 1998

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. James D. Leahey, Environmental Control Manager
Degussa Corporation
3900 South Clinton Avenue
South Plainfield, N.J. 07080

Re: Notice of Violation
Degussa Corporation
3900 South Clinton Avenue
South Plainfield, N.J. 07080
EPA ID # NJD002195303

Dear Mr. Leahey:

This Notice of Violation is issued pursuant to Section 3008 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984, 42 U.S.C. §§ 6901, 6928.

Pursuant to RCRA, as amended by HSWA, the U. S. Environmental Protection Agency (EPA) promulgated rules, regulations, and standards governing the handling and management of hazardous waste as set forth in 40 C.F.R. Parts 260-272, used oil in 40 C.F.R. Part 279, and underground storage tanks in Parts 280-282. For the purposes of this Notice of Violation, the hazardous waste regulations governing the generation of hazardous waste were promulgated in 1980 and amended by HSWA in 1984. Rules, regulations, and standards governing the generation of used oil were promulgated in 1992 and amended in 1993 (F.R. vol. 58 #83 pages 26420 through 26426).

On August 18, 1980, August 12, 1991, and October 30, 1991, EPA received notification from Degussa Corporation, Metal Group, Inc. (DCMG) that it conducted a business involving hazardous waste activity, in particular, the generation of large quantities of hazardous waste (more than 1000 kilograms of hazardous waste per month).

On or about **April 27, 1998**, pursuant to Section 3007 of RCRA, 42 U.S.C. § 6927, a duly authorized representative of EPA conducted a RCRA Hazardous Waste Compliance Evaluation Inspection (CEI) of DCMG located in South Plainfield, N.J. During the CEI, observations were made regarding the mishandling of hazardous waste. During the inspection, representatives of DCMG indicated that DCMG used to but no longer generated more than 1000 kg. per month of hazardous waste. Based upon the information obtained during the inspection, EPA has

determined that DCMG occasionally exceeds the 1000 kilogram limit and is a large quantity generator (LQG) of hazardous waste. As such, DCMG is subject to all applicable regulations at 40 C.F.R. Parts 260 through 268 and 40 C.F.R. Parts 270 through 272 which govern the generation of hazardous waste at facilities. In particular, regulations promulgated at 40 C.F.R. Part 262 apply to the generation of hazardous waste.

As a result of the CEI, the following violations of the RCRA Regulations were found.

1. In accordance with the Hazardous Waste Regulations found at 40 C.F.R. § 262.34(d)(2) large quantity generators must comply with the Use and Management of Containers Regulations at 40 C.F.R. § 265 Subpart I including but not limited to 40 C.F.R. §265.173(a). This regulation states that "a container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove wastes".

At the time of the inspection, at least three (3) 5-gallon containers holding barium wastes (D005) dated April 24, 1998 were not closed. Facility personnel indicated that these containers held barium wastes having barium concentrations in excess of the TCLP levels and therefore are hazardous wastes. The containers had a hazardous waste label on them. All containers holding hazardous waste must be kept tightly closed when storing wastes, except when adding and/or removing wastes. At the time of the inspection, no wastes were being added or removed from said containers and therefore the containers were supposed to be tightly closed.

2. The Hazardous Waste Regulations at 40 C.F.R. Subpart D require that owners and operators as well as large quantity generators must have a Contingency Plan for their facility. This plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil or surface water. DCMG has such a plan.

In accordance with 40 C.F.R. § 265.54, Amendment of Contingency Plan, specifically 40 C.F.R. § 265.54(d) the Contingency Plan must be amended when the list of emergency coordinators changes. At the time of the inspection, several personnel mentioned on the list of emergency coordinators for the DCMG were no longer in the employ of DCMG. In addition, several of the phone numbers have changed for those that are still in the employ of DCMG. Revision of the Contingency Plan is required immediately in accordance with 40 C.F.R. §265.54(d).

Periodic review and revision of the Contingency Plan should occur.

Within thirty (30) days of receipt of this letter, please provide a written response explaining how the above violations have been corrected to:

Mr. Philip F. Clappin
Enforcement Officer
U.S. Environmental Protection Agency-Region II
290 Broadway
New York, New York 10007-1866

If you have any questions regarding this matter, please contact Mr. Philip Clappin at (212) 637-4129 or Mr. Philip Flax at (212) 637-4143.

Sincerely yours,

George C. Meyer, P.E., Chief
RCRA Compliance Branch, EPA Region II

cc: Wolfgang Skacel, Acting Chief
Hazardous Waste Compliance & Enforcement
New Jersey Department of Environmental Protection

bcc: Phil Clappin, 2DECA-RCB
Phil Flax, 2DECA-RCB
Charles Zafonte, 2DECA
Christopher Jimenez, 2ERRD-RPB
RCRA Files, 20PM/ISS

Degussa

Degussa
Corporation

Metal Group

August 18,1998

Z009 753 872

Mr. Philip F. Clappin
Enforcement Officer
U.S. Environmental Protection Agency-Region II
290 Broadway
New York, New York 10007-1866

Cert #

Mr. Clappin,

The following is in response to your letter of August 12,1998:

1. Degussa has retrained those individuals directly involved with the storage of hazardous waste regarding 40 C.F.R. Section 265 Subpart I, the Use and Management of Containers.

2. Degussa Corporation has not been a large quantity generator (LQG) of hazardous waste since June of 1995. Since that time every months net weight shipment of hazardous waste has been less than 1000 kilos, in June of 1995 our Contingency plan was up to date. At the time of the EPA inspection, we were and continue to be a small quantity generator (SQG) and not required to have a contingency plan.

Degussa Corporation has and will continue to utilize our Contingency Plan in the unlikely event of a hazardous waste incident. The Contingency Plan has been revise to reflect the changes in emergency coordinators and their phone extensions. Periodic review of the Contingency Plan will occur in the future.

If there are any further comments please call me at (908) 226-2134.

Very Truly Yours,

Jim Fedorchak

Jim Fedorchak
Manager Permits Administrator
Degussa Corporation

3900 South Clinton Avenue South Plainfield, NJ 07080 908-561-1100 FAX 908-769-9456

166

REFERENCE 8

Please print or type with ELITE type *(12 characters/inch)* in the unshaded areas only.

Form Approved OMB No. 158-R0016
GSA No. 0246-EPA-OT

EPA — U.S. ENVIRONMENTAL PROTECTION AGENCY
NOTIFICATION OF HAZARDOUS WASTE ACTIVITY

INSTALLATION'S EPA I.D. NO.	NJD002195303
I. NAME OF INSTALLATION	METZ METALLURGICAL CORPORATION
II. INSTALLATION MAILING ADDRESS	3900 SOUTH CLINTON AVE S PLAINFIELD, NJ 07080
III. LOCATION OF INSTALLATION	3900 SOUTH CLINTON AVE S PLAINFIELD, NJ 07080

1980 AUG 18

INSTRUCTIONS: If you received a preprinted label, affix it in the space at left. If any of the information on the label is incorrect, draw a line through it and supply the correct information in the appropriate section below. If the label is complete and correct, leave Items I, II, and III below blank. If you did not receive a preprinted label, complete all items. "Installation" means a single site where hazardous waste is generated, treated, stored and/or disposed of, or a transporter's principal place of business. Please refer to the INSTRUCTIONS FOR FILING NOTIFICATION before completing this form. The information requested herein is required by law *(Section 3010 of the Resource Conservation and Recovery Act)*.

DETACH

FOR OFFICIAL USE ONLY

COMMENTS: C

INSTALLATION'S EPA I.D. NUMBER	APPROVED	DATE RECEIVED (yr., mo., & day)	
FNJD002195303 T/R C		800818	N.J. Dept. #15305

I. NAME OF INSTALLATION

METZ METALLURGICAL CORPORATION

II. INSTALLATION MAILING ADDRESS

STREET OR P.O. BOX: 3900 SO. CLINTON AVENUE

CITY OR TOWN: SO. PLAINFIELD ST.: NJ ZIP CODE: 07080

III. LOCATION OF INSTALLATION

STREET OR ROUTE NUMBER: ~~SAME~~

CITY OR TOWN: ST.: ZIP CODE:

IV. INSTALLATION CONTACT

NAME AND TITLE *(last, first, & job title)*: E. PETER BECKER EXEC V PRES

PHONE NO. *(area code & no.)*: 201-561-1100

V. OWNERSHIP

A. NAME OF INSTALLATION'S LEGAL OWNER: METZ METALLURGICAL CORP

B. TYPE OF OWNERSHIP *(enter the appropriate letter into box)*: M

F = FEDERAL
M = NON-FEDERAL

VI. TYPE OF HAZARDOUS WASTE ACTIVITY *(enter "X" in the appropriate box(es))*

- [ ] A. GENERATION
- [ ] B. TRANSPORTATION *(complete item VII)*
- [X] C. TREAT/STORE/DISPOSE
- [ ] D. UNDERGROUND INJECTION

VII. MODE OF TRANSPORTATION *(transporters only – enter "X" in the appropriate box(es))*

- [ ] A. AIR
- [ ] B. RAIL
- [ ] C. HIGHWAY
- [ ] D. WATER
- [ ] E. OTHER *(specify)*:

VIII. FIRST OR SUBSEQUENT NOTIFICATION

Mark "X" in the appropriate box to indicate whether this is your installation's first notification of hazardous waste activity or a subsequent notification. If this is not your first notification, enter your installation's EPA I.D. Number in the space provided below.

- [X] A. FIRST NOTIFICATION
- [ ] B. SUBSEQUENT NOTIFICATION *(complete item C)*

C. INSTALLATION'S EPA I.D. NO.: ~~N[illegible]~~

IX. DESCRIPTION OF HAZARDOUS WASTES

Please go to the reverse of this form and provide the requested information.

I.D. FOR OFFICIAL USE ONLY

W N J D 0 0 2 1 9 5 3 0 3 2 1

IX. DESCRIPTION OF HAZARDOUS WASTES *(continued from front)*

A. HAZARDOUS WASTES FROM NON-SPECIFIC SOURCES. Enter the four-digit number from 40 CFR Part 261.31 for each listed hazardous waste from non-specific sources your installation handles. Use additional sheets if necessary.

1	2	3	4	5	6
F001					
7	8	9	10	11	12

B. HAZARDOUS WASTES FROM SPECIFIC SOURCES. Enter the four-digit number from 40 CFR Part 261.32 for each listed hazardous waste from specific industrial sources your installation handles. Use additional sheets if necessary.

13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30

C. COMMERCIAL CHEMICAL PRODUCT HAZARDOUS WASTES. Enter the four-digit number from 40 CFR Part 261.33 for each chemical substance your installation handles which may be a hazardous waste. Use additional sheets if necessary.

31	32	33	34	35	36
	P104	U122	U133	U154	U239
37	38	39	40	41	42
43	44	45	46	47	48

D. LISTED INFECTIOUS WASTES. Enter the four-digit number from 40 CFR Part 261.34 for each listed hazardous waste from hospitals, veterinary hospitals, medical and research laboratories your installation handles. Use additional sheets if necessary.

49	50	51	52	53	54

E. CHARACTERISTICS OF NON-LISTED HAZARDOUS WASTES. Mark "X" in the boxes corresponding to the characteristics of non-listed hazardous wastes your installation handles. *(See 40 CFR Parts 261.21 – 261.24.)*

☐ 1. IGNITABLE (D001) ☒ 2. CORROSIVE (D002) ☐ 3. REACTIVE (D003) ☐ 4. TOXIC (D000)

X. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

SIGNATURE	NAME & OFFICIAL TITLE *(type or print)*	DATE SIGNED
W. Peter Metz	W. PETER METZ, PRESIDENT	Aug 15, 1980

EPA Form 8700-12 (6-80) REVERSE

DETACH

RP

AUG 29 12 - 5 PM '80
ENVIRONMENTAL PROTECTION AGENCY
NEW YORK, N.Y. 10007

REFERENCE 9

Christine Todd Whitman
Governor

State of New Jersey
Department of Environmental Protection
Office of the Commissioner
401 East State Street
CN 402
Trenton, New Jersey 08625-0402

Robert C. Shinn, Jr.
Commissioner
Tel. (609) 292-2885
Fax. (609) 292-7695

June 15, 1998

Mr. James Leahy
Environmental Control Manager
Degussa Corporation
Metal Group
3900 South Clifton Avenue
South Plainfield, New Jersey 07080
Attn: Ms. Theresa Truppi
Director of Operations

Dear Mr. Leahy:

The Department is happy to be presenting the attached Facility-Wide Permit (FWP) to Degussa Corporation (Degussa). The Department would like to commend Degussa for the hard work, dedication and spirit of cooperation that was so vital to the development of this permit.

The incorporation of pollution prevention into the operational and regulatory framework of a facility is a key element in the FWP process. Throughout this process, Degussa has demonstrated a commitment to exploring innovative pollution prevention technologies to reduce the use and release of hazardous substances.

Additionally, the Department feels that a consolidated and streamlined permit process will help industries succeed in today's economic climate.

Sincerely,

Gary Sondermeyer
Assistant Commissioner

Robert C. Shinn Jr.
Commissioner

Enclosure

New Jersey is an Equal Opportunity Employer
Recycled Paper

FACILITY WIDE PERMIT COVER PAGE

Issued To: **Degussa Corporation**
3900 South Clinton Avenue
South Plainfield, New Jersey 07080

Permit Number: **NJ00010**
Issuance Date: **June 8, 1998**
Effective Date: **July 8, 1998**
Expiration Date: **July 8, 2003**

This Facility-Wide Permit is being issued in accordance with N.J.S.A. 13:1D-35 et seq., particularly N.J.S.A. 13:1D-48, N.J.A.C. 7:1K et seq., N.J.S.A. 13:1E-1 et seq., N.J.A.C. 7:26 et seq.,N.J.S.A. 58:10A-1 et seq., N.J.A.C. 7:14A et seq., and N.J.S.A. 26:2C-1 et seq., N.J.A.C. 7:27 et seq.,

I. Permit Replacement Activities

The FWP will replace the following existing permits/certificates listed below.

a. Air Pollution Control (APC) certificates listed in Attachment 1;

b. Discharge to Surface water of non-contact cooling water/storm water under NJPDES permit NJ0034835.

II. New Permit Activities

The FWP contains provisions to permit the new activities listed below:

a. Air sources and controls listed in Attachment 2:

b. Cooling water/storm water detention basin under a Discharge to Ground Water Permit NJ0107743.

III. Activities Terminated

The FWP will terminate the following existing permit listed below:

i. Air Pollution Control (APC) certificates listed in Attachment 3.

IV. Monitoring and Reporting Requirements

The FWP contains provisions covering the following monitoring and reporting requirements:

a. Emission reporting and tracking requirements;

b. Submittal of New Jersey Pollution Prevention and Release Reports pursuant to N.J.A.C. 7:1K-5.1 and 6.1;

c. Record keeping and reporting of hazardous waste pursuant to N.J.A.C. 7:26-7.4(g);

Director NJDEP, Division of Solid and Hazardous Waste	Administrator NJDEP, Air Quality Permitting	Director NJDEP, Division of Water Quality

ATTACHMENT 1
AIR POLLUTION CONTROL CERTIFICATE REPLACED BY FACILITY-WIDE PERMIT

OLD STACK NUMBER	OLD CERTIFICATE NUMBER	NAME	STACKS IN NEW FWP
7	97626	Mezzanine Section III	A2O1P1R4
17	101551	Ammonia Scrubber	Q3W2Y2CC2DD2
20	0104842	Dean Product Recovery	M1
21	098825	Crystal Room Scrubber	R3V1
27	042951	Silver Chloride Exhaust	C1
33	116019	Mezzanine Acid Scrubber	O3P2R2Z2EE2
33	1116019	Mezzanine Ammonia Scrubber	S1Z3
34	097632	Metox Scrubber	A3B1
38	098072	Catalyst Dust Collector 1	G1
39	096914	Catalyst Dust Collector 2	G2
43	098073	MR Tank 203 Vent	Q2
46	106969	WFProduct Recovery	E1F1I1J1K1L1
47	073527	Rotary Baghouse and Scrubber	N1
54	098361	Acid Scrubber	G9W3X1Y1AA1CC1DD1EE1
59	070708	Fulton Thermopac Boiler	FF1
60	100346	AB Scrubber	Q7
69	097634	Catalyst Filter Press Cyclone	G7
70	100054	Cooper Scrubber	A4B2G6O2Z1
71	079814	Venturi Scrubber	E2F2
72	101905	Chlorine Scrubber	AA2
73	109597	NOX Scrubber	A1G8H1R1
74	094060	Bayco Furnace (uncontrolled)	N2
75	094496	Superior Boiler	FF2
84	098826	Reduction Tank	G5O4
85	098827	Filter Wash Station	Q6
90	099835	Spent Catalyst Silo	G4
94	101552	EMD (Vitramon) Stack	X2
95	102014	AgCu Scrubber	U2
96	200346	CD Tank Scrubber	Q4
102	106531	7000 Series Scrubber	W1
103	110963	Flake Vent System	S2T3
106	111350	AgCuBaghouse	U1
108	114694	Methanol Storage Tank	EE3
109	116976	Cl2 Scrubber (new)	BB1
110	119503	FVS Baghouse 3	T1
112	120565	FVS Baghouse 4	T2

ATTACHMENT 2
NEW ACTIVITIES ADDED
BY FACILITY-WIDE PERMIT

STACK NUMBER	NEW SOURCE /CONTROL	PROCESS	EMISSION INCREASE
A3B1 Old 34	1. Billet Fill Station 2. Attritor Mill (A Only)	A and B	NA
A6B3 New	1. GE Calcinator 1 2. GE Calcinator 2	A and B	
C1 New	1. Hot Mill 2. Finishing Mill	C	0.54 Tons/year HAPVOC
D1 New	1. Velex Mixer 2. Eireich Mixer 3. Billet Fill Station 4. Isostatic Press 5. Control--Baghouse	D	
E1/F1 Old 46	1. Tilt Induction Melter 2. Gas Platform Melter 3. Pushup Induction Melter	E/F	
F3 New	1. Hot Mill 2. Stanat Mill 3. I2S Mill 4. #2 Mill 5. Ruesch Mill	F	2.9 Tons/Year HAPVOC
G2 Old 87/88(Terminate)	1. Catalyst Silo 1 2. Catalyst Silo 2	G	
G3 Old 89 (Terminate)	1. Catalyst Silo 3 2. Catalyst Silo 4 3. Catalyst Silo 5	G	
G5O4,G6O2, and G8A1H1R1 Old 84, 70 and 73	Add Ascorbic Acid and erythorbic acid to: 1. Reduction Tank 2. Reactor 24 3 Reactor 25 4. Dissolver 8 5. Dissolver 9	G	
O4G5 O2G6 O3P2R2Z2EE2 Old 84, 33, and 70	Add Ascorbic Acid and erythorbic acid to: 1. Reducing Tank 2. Reactor 18 3. Reactor 23 4. Reactor 26 5. Reactor 27 6. Centrifuge 1 7. Centrifuge 2	O	
P1 Old 33	1. Tank 4A 2. Tank 5	P	

ATTACHMENT 2 (Cont.)
NEW ACTIVITIES ADDED
BY FACILITY-WIDE PERMIT

STACK NUMBER	SOURCE /CONTROL	PROCESS	EMISSION INCREASE
S1Z3 Old 33	1. Mixing Tank 1 2. Mixing Tank 2	S	
O3P2R2Z2EE2 Old 33	1. Reactor 27	O	
Q1 New	1. Drying Oven	Q	
Q4 Old 43	1. Tank D1 2. Tank E	Q	
Q5 Old 96	1. Tank 207 2. Tank 208 3. Tank 209	Q	
S2T3 Old 103	Increase HAP VOC 1. Centrifuge 1 2. Centrifuge 2	S	5 ton/year HAPVOC
S2T3 Old 103	1. 20 Wash Vessels	T	1.65 ton/year HAPVOC
U1 Old 106	1. Reactor 12	U	
U2 Old 95	1. Reactor 12	U	
W1	1. Centrifuge 701	W	
W4Y3 New	1. 30 Drying Ovens 2. Control—Baghouse	W,Y	
W1, W2,W3, W4 Old 102, 17, 54 and New	Add VOC as Raw Material All sources Reactors NI-1 to NI-3 Vacuum Filter NI-4 Wastewater Tank NI-5	W,GG	0.68 Tons/year HAPVOC
G9W3X1Y1AA1CC1DD1EE1 Old 54	1. Retort 1 2. Retort 2	X	
(54 cont)	1. 8 Process Vents	AA	
(54 cont)	Reactors A - F Reactor 12 Reactors 43 - 47 Hoods 1, 2 and 3 Furnaces M1 and M2 Furnaces T1 and T2 Dryer DR1 Glove Box GB1	CC and DD	0.5 Tons/year HAP VOC (0.25 each process)

ATTACHMENT 2 (Cont.)
NEW ACTIVITIES ADDED
BY FACILITY-WIDE PERMIT

STACK NUMBER	SOURCE /CONTROL	PROCESS	EMISSION INCREASE
(54 cont)	1. Nitric Acid Tank1 2. Nitric Acid Tank 2	EE	
X2 Old 94	1. Mill 6	X	
A4B2G6O2Z1 Old 70	1. Vacuum Oven 1 2. Vacuum Oven 2 3. Centrifuge 3 4. Centrifuge 4 5 Washing Vessel 2 6. Washing Vessel 3 7. Hydrazine Head Tank 1 8. Hydrazine Head Tank 2 9. NH4OH Head Tank	Z	1.75 Tons/year HAPVOC
Z3	1. Reactor 5 (Scenario B) 2. Venturi Scrubber	Z	
AA2 Old 72	1. Vacuum Filter 2. Vacuum Filter	AA	
EE3 Old 108	1. Methanol Storage Tank	EE	1.5 Tons/year HAP VOC
GG1W1 Old 102	Reactor NI-1 Reactor NI-2 Reactor NI-3 Vacuum Filter NI-4 Wastewater Tank NI-5	GG	0.0013 Tons/Year HAP Particulate 0.0034 Tons/Year Exempt VOC

PROCESS Q

METAL RECOVERY (WASTE WATER TREATMENT)

Section 1 A: Process Description

The Metal Recovery process is used to recover precious metals from various liquid streams generated in other processes at the facility. The streams which are inputs to this process are actually NPO for the processes generating the waste water. These liquids are combined into 4 general inputs into the system: (1) Copper, (2) EMD/Chlorine, (3) Acid processes and Base processes.

The process includes 3 steps: Storage/precipitation, Filtering and pH Adjustment. The Waste water is sampled after the filtering step. If recoverable quantities of precious metal are present, the waste water is sent back to the precipitation step for additional treatment. Sludge generated in the filtering step is dried in an oven with a condenser that recovers Hcl which is sent back to the head of the treatment system. The dried sludge is sent to Process N: Bayco and Rotary for recovery.

Sources of Nonproduct Output

The main source of NPO from this process includes waste waters containing salts, formaldehyde and methanol which are discharged to the Middlesex County Utilities Authority. Also, untreated air emissions of formaldehyde and methanol as HAP-VOCs occur from the storage tanks.

New Permit Actions

A. Three sources (Tanks 207, 208 and 209) currently connected to separate stacks are being connected to an existing control device, the CD Scrubber--Control Device Q5 Old 96.

B. Two existing tanks (D1 and E) are being connected to an existing uncontrolled stack, Stack Q3 Old 43.

C. A new drying oven with a condenser and baghouse is being constructed and permitted for the first time. This new oven removes Hcl from the waste water treatment sludge before the sludge is sent to process N: Bayco and Rotary for recovery.

PROCESS HH

WATER DISCHARGE

Section 1 A. Process Description

Discharges to the Waters of the State

Degussa discharges non-contact cooling water and stormwater runoff to the waters of the State. The Non-contact cooling water system provides cooling water to the reactors, dissolvers and other equipment in the manufacturing processes. The cooling water supply is from two on-site production wells. The cooling water is used in jackets surrounding the manufacturing equipment and does not come in contact with the contents inside of the equipment. The permittee has informed the Department that it does not use any corrosion inhibitors, biocides, or other cooling water additives in its non-contact cooling water at the time of permit issuance. If the permittee decides to begin using any of the agents in the future, the permittee must notify the Department at least 180 days prior to use so that the permit may be reopened to incorporate any additional limitations deemed necessary.

Prior to being discharged to surface water through permitted outfall discharge serial number (DSN) 001, the cooling water flows through an unlined drainage ditch and detention basin. The influent and effluent from the basin are continuously monitored with a pH and conductivity meter. These meters will detect any malfunctions of the cooling system or breakthrough between the manufacturing equipment and cooling water jackets and will trigger an automatic shutoff system that will stop any discharge to surface water in the event the cooling water becomes contaminated. If this occurs, the water in the unlined ditch and detention basin is transferred to storage tanks in Process Q: Metal Recovery for additional treatment and recovery of any precious metals that may be in the cooling water. Discharges to the unlined drainage ditch and basin are considered to be a discharge to ground water. However, impacts to ground water have not been previously considered prior to this FWP. After additional treatment to ensure compliance with surface water limits, the water is discharged through DSN 001.

The stormwater collection and conveyance system consists of gratings in the macadam that channel stormwater runoff to concrete collection pits and conduits which proceed by gravity to the same unlined ditch and detention basin as mentioned above. This stormwater commingles with the non-contact cooling water before emptying into the unlined drainage ditch and detention basin. All roofdrain stormwater is collected and treated in the pretreatment system (Process Q: Metal Recovery) and discharged to MCUA. The stormwater is discharged through DSN 001.

Receiving Waters: Surface Water-Unnamed tributary to the Bound Brook, Stream Classification: FW2-NT
Ground Water-Passaic Formation of the Triassic Age

Process Waste Water
All process wastewater is pre-treated in Process Q: Metal Recovery and discharged to Middlesex County Utilities Authority via Industrial User permit # 24055.

REFERENCE 10

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM		PROJECT NOTE
TO: Metz Metallurgical Corp. Site File	DATE: 10/27/99	Page 1 of 1
FROM: Kiersten Dorneman		
SUBJECT: Releases		
REFERENCE Release reports attached		

On 27 October 1999, START member Dorneman compiled the release incidents that occurred at the Metz Metallurgical (Metz) site.

- 31 March 1988 - Approximately 100 gallons of a corrosive liquid (pH = 12) spilled onto the ground adjacent to the northwest corner of building A. The affected soil was excavated to less than a pH of 9. The removed soil was nonhazardous and was treated and disposed of through Chemical Management Inc. (Page Nos. 1-5).

- 8 April 1988 - A flammable liquid leaking from a pipe in the Refining Furnace Room was ignited by sparks from an electric motor. The resulting fire was extinguished and the water used to smother the fire did not escape the confines of the plant and its containment system (Page Nos. 1-2).

- 22 and 26 September 1988 - Ammonium chloride was released from New Jersey stack No. 054. The amount of material released during each incident is estimated to be less than two pounds (Page Nos. 1-2).

- 30 March 1989 - Therminol 55 was released. The heat transfer fluid does not contain PCBs (Page Nos. 6-10).

- 2 and 3 May 1989 - Material contained in an oven located in the Refining Furnace Room caught on fire and released large quantities of smoke. No action was taken by the responding fire department because the source of the fire was contained (Page Nos. 1-2).

Engineers
Planners
Economists
Scientists

RECEIVED
OCT 27 '89 05 AM

October 26, 1989

NJ026404.A0

Bureau of Environmental Evaluation and
Cleanup Responsibility Assessment
NJDEP/Division of Waste Management
401 East State Street
CN028
Trenton, New Jersey 08625

Attention: Mr. Stephen E. Maybury

Gentlemen:

Subject: Metz Metallurgical Corporation, Middlesex County, South Plainfield, New Jersey
ECRA Case #86108

In accordance with your request in a telephone conversation on October 12, 1989, I have enclosed a list of incidents which have occurred at Metz Metallurgical Corporation since the ECRA Site Evaluation Submission was submitted.

Based on the nature of the incidents, and the materials involved, it is our opinion that no additional sampling is required.

Please feel free to call me if you have any questions about this matter. Both Metz and CH2M HILL look forward to receipt of the NJDEP comments on the Amended Sample Plan.

Sincerely,

CH2M HILL

Paul B. Dahlgren

Paul B. Dahlgren
Project Manager

NJC3/014WP
Enclosure

p. 1

REPORTABLE RELEASES AT METZ METALLURGICAL CORP. SINCE SITE EVALUATION SUBMISSION

1. March 30, 1988 - Release of corrosive liquid from a truck at Dock #6. Approximately 100 gallons of liquid at a pH of 12 was released to land. The contamination was mitigated by in house personnel.

2. April 8, 1988 - Fire in Refining Furnace Room caused by flammable liquid leaking from a pipe and being ignited by sparks from an electric motor. There was no release to land of the water used to fight the fire because of the extensive pits and containments throughout the plant. All the water was contained.

3. September 22, 1988 - Release of Ammonium Chloride from NJ stack #054 to air. The amount of material released is estimated at less that 2 pounds.

4. September 26,1988 - Release of Ammonium Chloride from NJ stack #054 to air. The amount of material released is estimated at less than 2 pounds.

5. May 2/3, 1989 - Report of fire in Refining Furnace Room. Material contained in an oven caught on fire and released large quantities of smoke. The fire dept. responded but decided to take no action because the source of the fire was contained.

TELECOPIER REQUEST FORM

CH2M HILL/NJO

PARSIPPANY, NEW JERSEY

OFFICE PHONE NO.: (201) 316-9300

FAX NO.: (201) 334-5847

To: STEVE MAYBURY Office: _____

Company (if other than CH2M HILL Office): NJDEP - ISEE

Telecopier Phone No.: (609) 633-1454

Sender's Name: PAUL DAHLGREN

Sender's Employee Number: 8355

Project Number: NJO 26404.A0

Do you want this copy returned to you? ___ no ✓ yes

Number of Pages (excluding cover page) 9

ADDITIONAL COMMENTS: THE ENCLOSED MAP AND MEMO EXPLAIN THE MARCH '88 CORROSIVE LIQUID SPILL IN AREA A AT MATZ METALLURGICAL, AND THE MATERIAL SAFETY DATA SHEET DESCRIBES THE MATERIAL. PLEASE CALL ME WHEN YOU HAVE REVIEWED IT.

****

NJ26/79

p.3

Degussa

Metz Metallurgical
Corporation

TO: Paul Dahlgren

FROM: C. Scott Eves

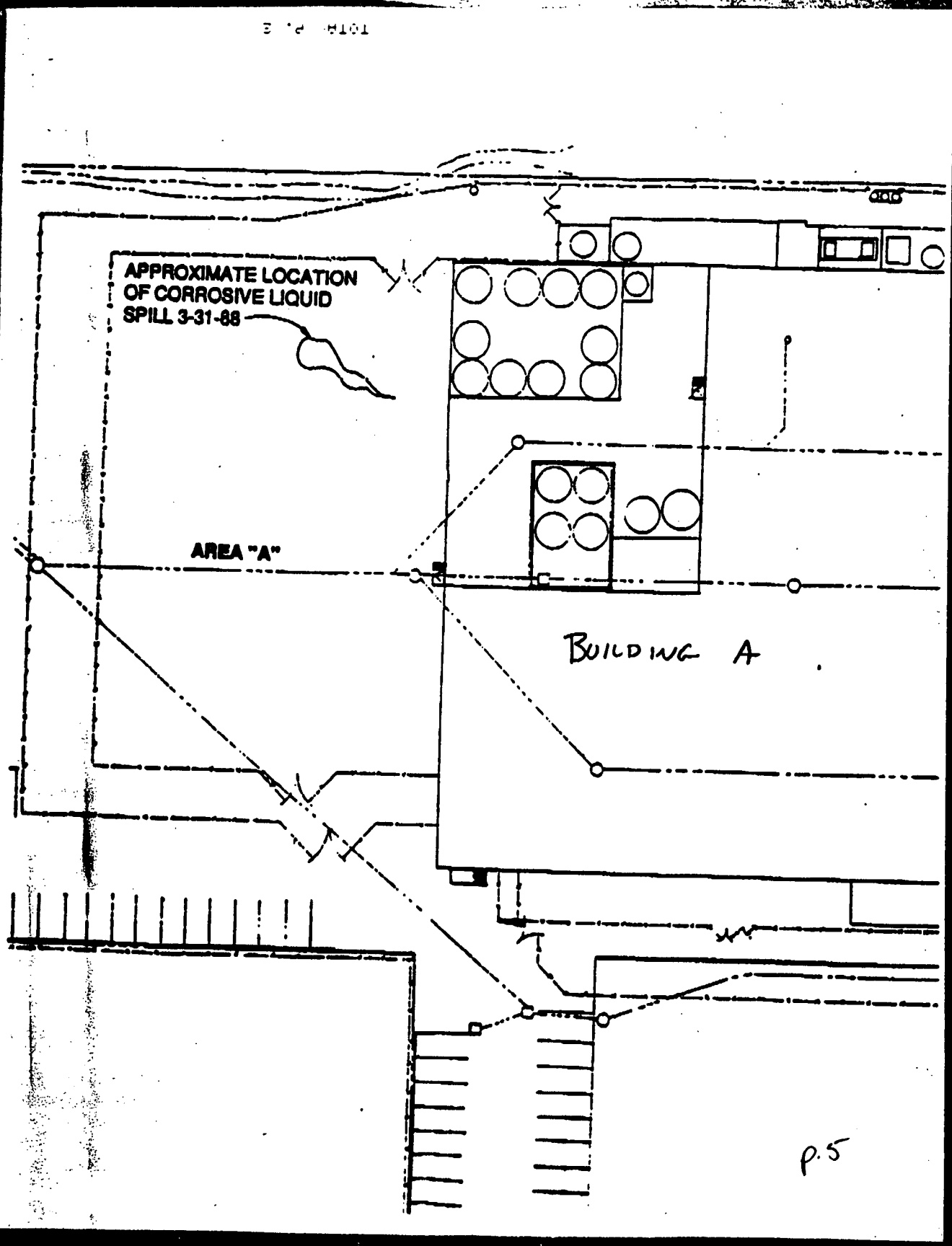
RE: Corrosive Liquid Spill

DATE: November 7, 1989

On March 31, 1988, a spill occurred from a shipment of precious metal sweeps being sent out for recovery. Corrosive liquid (pH >9) was leaking out of several of the drums and onto the ground. The leaking drums were placed in a contained area and the area contaminated by the spill was cleaned up. The cleanup was a matter of absorbing all the liquid with absorbent booms and pads and excavating until moistened soil at the bottom of the excavation showed a pH <9. EP Toxicity tests on the removed soil showed it to be nonhazardous. The 15 drums filled with soil and absorbents were treated and disposed of through Chemical Management Inc. I have enclosed a map showing the approximate location of this release.

p. 4

3600 South Clinton Ave South Plainfield, NJ 07080 (201) 561-1100 TWX 710-997-9524


APPROXIMATE LOCATION
OF CORROSIVE LIQUID
SPILL 3-31-88
AREA "A"
BUILDING A

p.5

CH2M Engineers Planners Economists Scientists

December 1, 1989

NJ026404.A0

Bureau of Environmental Evaluation and
Cleanup Responsibility Assessment
NJDEP/Division of Waste Management
401 East State Street
CN028
Trenton, New Jersey 08625

Attention: Mr. Stephen E. Maybury

Subject: Metz Metallurgical Corporation, Middlesex County, South Plainfield, New Jersey
ECRA Case # 86108

During a telephone conversation on November 16, 1989, you requested written confirmation of items we discussed concerning the Metz Metallurgical Corporation (MMC) South Plainfield, New Jersey facility. Two of the items were related to environmental incidents at the MMC plant which have occurred since the Site Evaluation Submission was submitted to the NJDEP on March 4, 1986. Specifically, these items were:

1) Confirmation that incidents described in a letter dated October 26, 1989 had been reported to the NJDEP "Hotline".

2) Confirmation that all incidents which could potentially impact the environment have been reported to the Industrial Site Evaluation Element (ISEE).

A third item discussed was a basin recently installed by MMC in the ditch which carries their NJPDES-permitted discharge offsite.

CH2M HILL North Atlantic Regional Office 99 Cherry Hill Road, Suite 304
Parsippany, New Jersey 07054-1102 201.316.9300

This letter includes a confirmation of three topics mentioned above, as well as details of one additional incident (Item 4) which was inadvertently omitted from the October 26 letter.

Details of the four items are presented below:

Item 1 - Five (5) incidents which occurred at the Metz Metallurgical Corporation (MMC) site since the submission of the ECRA Initial Notice (March 4, 1986) and which resulted in the release of hazardous material to the environment, were described in correspondence to you, dated October 26, 1989. Additional information on one of the incidents (leakage of corrosive precious metal sweeps) was submitted by facsimile on November 8, 1989. Mr. Scott Eves, Manager of the Environmental Control Department at MMC has confirmed in response to your concern, that all five of the incidents described in the correspondence outlined above, were reported to appropriate officials and agencies, including the NJDEP "Hotline", at the time of occurrence.

Item 2 - You expressed concern that all incidents which could have resulted in the release of hazardous material to the environment, and not only those of a magnitude to be "reportable incidents" should be addressed. In response to that concern, Mr. Eves made a complete review of the environmental records of the MMC plant. During that review, he located records of an incident which occurred in March, 1989, which is discussed below (Item 4). With the exception of this incident, and the two releases of silver chloride which were reported to ISEE previously, Mr. Eves has confirmed that there have been no other incidents at the MMC plant which might result in environmental concern.

Item 3 - I advised you in our telephone conversation that MMC has constructed a temporary basin as part of the NJPDES- permitted outfall. The purpose of the basin is to provide a mechanism to contain the non-contact cooling water and precipitation runoff from the facility, if there should be an accidental discharge from the plant. I have enclosed a map which shows the approximate location and dimensions of the basin. Soil excavated to construct the temporary basin has been stockpiled onsite. The temporary basin will be replaced by a larger permanent structure, after design and permitting are completed.

p.7

Item 4 - The additional incident mentioned above was a spill of Therminol 55 on March 30, 1989. A report of the release with a log of notifications is attached to this letter. The NJDEP agency called at 1:27 p.m. on March 30, 1989 was the "Hotline".

Please call me if you need any additional information on these or other topics.

Sincerely,

CH2M HILL

Paul B Dahlgren

Paul B. Dahlgren
Project Manager

NJC1/069WP

Enclosures (2)

cc: Scott Eves

p.8

APPENDIX A

Summary of Reporting Activity as Regards Therminol 55 at Metz Metallurgical Corporation on March 30, 1989.

1:20 p.m.	Identified the reportable spill of Therminol 55
1:27 p.m.	NJDEP, LEPC, and South Plainfield Health Department notified by phone.
1:53 p.m.	South Plainfield Police Department, Fire Department, and Emergency Coordinator arrived on-site.
3:30 p.m.	Middlesex County Health Department notified of spill and mitigation measures.

ATTACHMENT 1

Monsanto

Monsanto Company
800 N. Lindbergh Boulevard
St. Louis, Missouri 63167
Phone: (314) 694-1000

March 13, 1990

Mr. Richard Alberti
Metz Metallurgical Corporation
3900 So. Clinton Avenue
So. Plainfield, NJ 07080

Dear Mr. Alberti:

The following is in response to your recent inquiry.

Monsanto Company discontinued sales of heat transfer fluids containing polychlorinated biphenyls (PCBs) in 1972. Prior to this time several heat transfer fluids in the Therminol® FR series of products contained various PCB formulations.

After 1972, the Therminol® heat transfer fluids were reformulated using aromatic hydrocarbon compounds which do not contain any PCBs. Therminol® products which do not have the designation "FR", e.g., Therminol® 55, in the product name do <u>not</u> contain PCBs.

Sincerely yours,

John H. Craddock /ve

John H. Craddock, Ph.D.
Director
Regulatory Affairs/Product &
Environmental Safety

ve
90-012

p.10

MAR 16 1990

REFERENCE 11

ANALYTIC RESULTS FOR SOIL SAMPLING PROGRAM

AT

Metz Metallurgical Corporation
3900 South Clinton Avenue
South Plainfield, NJ

ECRA Case #86108

July 31, 1987

prepared by:

[illegible]ics Incorporated/environmental consultants

[illegible] JACKSON DRIVE • CRANFORD, NJ 07016-3680 • (20[illegible]) 272-5770

TABLE OF CONTENTS

	Title	Page
1.0	Introduction	1
2.0	Technical Summary	2-4
3.0	Findings	5
3.1	Area A	5-7
3.2	Area B	10-11
3.3	Area C	13
3.4	Area D	15
3.5	Area E	17-18
3.6	Area F	21
3.7	Area G	23
4.0	Conclusions and Recommendations	25
4.1	Conclusions	25-26
4.2	Proposed Action	26

FIGURES

MMC-1117-1004	- Sample Results - Parameters Above Action Level	Pocket
MMC-1117-1005	- Proposed Locations for Limit of Contamination Samples	Pocket

LIST OF TABLES

3-1	Summary of Analytic Results - Area A	8
3-1-A	Summary of Analytic Results - Area AX Sidewall Samples	9
3-2	Summary of Analytic Results - Area B	12
3-3	Summary of Analytic Results - Area C	14
3-4	Summary of Analytic Results - Area D	16
3-5	Summary of Analytic Results - Area E (Silver)	19
3-5-A	Summary of Analytic Results - Area E (PP + 40)	20
3-6	Summary of Analytic Results - Area F	22
3-7	Summary of Analytic Results - Area G	24

APPENDICIES

Appendix A Laboratory Analytic Data, Quality Assurance and Chain of Custody

1.0 INTRODUCTION

A Sample Plan for Metz Metallurgical Corporation (Metz), of South Plainfield, New Jersey, was submitted to the New Jersey Department of Environmental Protection (NJDEP) as part of the Site Evaluation Submission (SES). The original plan was designed to investigate four general areas of concern:

1. Underground structures;
2. Spill History;
3. Surface water discharge;
4. Vacant land.

The rationale for the sample plan is included in the SES will not be repeated here.

Additional concerns were identified by the Bureau of Industrial Site Evaluation (BISE) during the site inspection and file review. As requested by BISE, a Revised Sample Plan was submitted to the NJDEP on December 10, 1986. The Revised Plan addressed environmental concerns in six locations on the Metz site, identified as Area A through Area F.

A conditioned approval of the Sample Plan was granted on February 18, 1987. With the exception of two conditions related to groundwater quality, the conditions were relatively minor modifications in sample method, location or parameter.

One of the major conditions required the collection of soil samples for VO analysis, in order to corroborate the conclusion drawn from hydrogeologic data, that the VO compounds detected in groundwater originated off-site. The requested sampling was conducted as described in Section 3.7 (Area G) of this report.

The second major condition of approval required the re-sampling of monitor wells for Priority Pollutant metals. The sampling was conducted concurrently with the soil sampling program. Anomalous results prompted Environics and Metz to resample groundwater again. Problems with the quality control/quality assurance of the groundwater data have been observed, although the exact cause of the problem has not yet been identified. Additional sampling and analysis of the groundwater is required. In order to avoid further delay in submission of the analytic results of the soil sample program, a separate report on the groundwater results will be prepared and submitted after the cause of the QA/QC problem has been identified and corrected.

2.0 TECHNICAL SUMMARY

The sampling program at Metz was conducted between April 1, 1987 and April 27, 1987. With the exception of minor deviations discussed in this report, all sampling activities were conducted in accordance with the Revised Sample Plan (December 10, 1986), as approved with conditions (February 18, 1987).

The major deviation from the Sample Plan was the substitution of the sample collection method in Areas B, C, and D. The sample collection method for these areas specified in the sample plan was the excavation of test pits, with the collection of sidewall samples for analysis. Instead of test pits, a standard 2 inch O.D. split spoon was driven with a manually powered sliding drop hammer. The sample was transferred to containers with stainless steel scoops in a method acceptable to the NJDEP. Decontamination of the split spoon was performed in accordance with the cleaning protocol included in the Sample Plan as modified by Item 7 of the Conditional Approval. The split spoon bore holes were plugged with impermeable material after completion. Except for possible sample contamination with asphalt fragments in Area B, there is no evidence of any adverse impact on sample quality from the substitution of sample collection methods.

Samples from four required locations were not collected due to field conditions, as discussed in Section 3. These locations included two from Area E, and one each from Areas F and G.

The Area E locations not sampled were within the rip rap adjacent to the outfall. Since contamination exists up and down stream from these locations, a lack of data from these points does not affect the conclusions which are drawn.

In Area F, one sample could not be obtained since refusal was encountered in the borehole (at 1.9 feet) before sample depth (6.0 feet) was reached. The most likely cause of refusal was the sample spoon encountering the footing for the building. A field decision was made not to attempt relocation of the boring, based on the following:

1. No visual or olfactory evidence of hydrocarbon contamination was observed in any of the adjacent borings;

2. The boring at the center of the tank location was less than three feet from the abandoned sample.

Bedrock was encountered at one sample location in Area G at 1.9 feet below grade. The NJDEP had requested collection of two sample depths from each boring location, at depths of 1.5 to 2.0 and 3.5 to 4.0 feet, or above bedrock. A field decision was made to collect only one sample from this location, from 1.4 feet to 1.9 feet. Since no VO compounds were detected in any of the Area G samples, this decision is considered justified.

Analysis of all samples was performed by Garden State Laboratories, Irvington, New Jersey. Analytic methodologies acceptable to the NJDEP were employed for all analyses. Quality control/quality assurance data is included in the laboratory report in Appendix A. Sample holding times, minimum detection limits and precision and accuracy criteria were within acceptable limits.

Of the seven areas sampled on the Metz site, only one (Area E) was targeted to evaluate the effects of a known discharge of hazardous material. Sample locations in Area E were selected in an attempt to delineate fully the vertical and horizontal extent of contamination in the stream. The stream bed contamination is not deep. The samples collected from the 0.5 to 1.0 foot increment were not all below the action level (AL) for silver, but were only slightly above it. It is likely that some contamination of the samples took place in the collection process. When a cleanup of the stream bed is conducted, post-cleanup sampling will be adequate to verify completeness of the recovery of silver. Similarly, the lateral samples at the north and south edges of the stream do not delineate the horizontal extent of contamination. However, based on the geometry of the stream bed, the horizontal extent of contamination cannot be more than a few feet outside the present sample locations. Post recovery samples will be used to verify adequacy of cleanup activities.

Other areas were sampled not to target a known spill or discharge, but to search for evidence of any residual contamination in exposed soil areas of the plant. The sample results show that contamination of the exposed soils is wide spread. Silver, cadmium and copper, all processed by Metz, were found in unacceptable concentrations at many locations. Concentrations vary from slightly above the AL to orders of magnitude above. Petroleum hydrocarbon (PHC) was also found above the AL at some locations, although its distribution appears to be less of a problem than metals.

Concentrations of thallium above the AL were found in nearly every sample collected. Concentrations were observed within limits of 1.96 and 10.7 ppm, with a mean of 6.58. Approximately 60 percent of values fall within one standard deviation of the mean. Since Metz does not process thallium, the values observed apparently represent a background condition.

The contamination by silver, cadmium, and copper in Area A, and of silver and cadmium in Areas C and D was not anticipated. The most likely source of the contamination is the accumulation of residue from the equipment stored outside the plant in these areas. If this is the case, numerous "hot spots" probably exist, with very high concentrations, as found in Area A. Between the "hot spots", there may be areas with no detectable contamination, and zones where moderate contamination exists as a result of mixing by runoff, soil movement during construction, by vehicle movement and other similar processes.

The vertical extent of contamination is undoubtedly limited by the shallow soil. Bedrock is generally encountered at less than a five foot depth. The horizontal extent will need to be determined. A conceptual plan for cleanup and verification of extent of contamination is discussed in Section 4. The appropriate supplemental Sample Plan and remedial action plans will be submitted at a later time.

3.0 FINDINGS

This section of the report contains a summary of the results of soil sampling conducted as part of the approved Sample Plan. These results are presented for each of the six areas of the site discussed in the Plan (Areas A through F), and a seventh area (Area G) in which a soil sampling was required as a condition of approval.

Each subsection contains: (1) a description of the area; (2) a summary of the environmental concern; (3) a description of the sampling proposed; (4) a discussion of any deviations from Sample Plan dictated by field conditions; (5) a presentation of analytic results.

Sample locations are shown on Drawing 1004, along with concentrations detected of parameters in excess of actions levels.

3.1 Area A

DESCRIPTION - Area A consists of unpaved (gravel) soil adjacent to the western edge of Building A. The southern portion of the area is bounded on the north by a paved ramp which provides vehicle access to the Refining Department, on the east by the wall of Building A, and on the south by a paved driveway south of the security fence. To the west, the gravel extends approximately 150 feet to a security fence, beyond which lies the open area identified as Area D.

The central portion of Area A extends northward from the paved ramp described above, adjacent to the west and north sides of an elevated concrete platform used for storage of raw materials.

The northern segment of Area A includes gravel between the elevated platform and the Patio. This portion of Area A (designated AX in the Sample Plan) has been excavated to bedrock (at a depth of approximately five feet) for a building expansion. All soil excavated has been stockpiled on site.

CONCERN - No record of discharges of hazardous materials exists for Area A. Inclusion of the area in the sample plan was based upon observation of stained and saturated soil made by the Case Manager during his site inspection on June 24, 1986.

PROPOSED SAMPLING - Sampling of Area A requested by the Case Manager included 11 locations (A-1 through A-11, shown on Drawing 1004. Requested parameters for all locations included volatile organics (VO), petroleum hydrocarbons (PHC), polychlorinated biphenyls (PCB), and priority pollutant metals (PP metals). Three of the sample locations (A-1 through A-3) were sampled for the full parameters in advance of submission of the Sample Plan, so that the proposed construction in Area AX could begin. Results of this sampling were included in the Sample Plan. Based upon those results, parameters for six of the remaining Area A samples were reduced to PHC, VO and 6 of the 13 PP metals. The reduced list of metals included materials produced by Metz (nickel, silver, zinc, cadmium, and copper) and one metal not used by Metz (thallium) which was detected in two of the three AX samples above the NJDEP "action level" (AL). Also included in proposed samples were sidewall samples from the AX excavation at three locations (two depths each) for PHC, cadmium and thallium.

The sample method proposed for Area A samples was collection of sidewall samples from test pits excavated by back hoe.

ACTUAL SAMPLING - Sampling within Area A was conducted in two sampling events. Excavation sidewall samples in Area AX were collected on April 14, 1987. Remaining Area A samples (locations A-4 through A-11) were collected on April 27, 1987. All sampling in Area A was conducted in accordance with the Sample Plan. Test pits were back filled upon completion of sampling.

RESULTS - Summaries of analytic results of the Area A and Area AX sidewall samples are included in Table 3-1 and 3-1-A respectively. The laboratory report fcr these data is included in Appendix A.

Every sample exceeded the action level (AC) for one or more parameters. The northern portion (locations A-1 through A-3 and AX sidewall samples) is widely contaminated at low levels by PHC. The highest concentration of PHC in this segment was found at location A-2 (1852 ppm). This area has already been excavated to bedrock with the soil stockpiled on site. PHC concentration in the AX sidewall samples exceed the AL at the soil surface (<425 ppm) and in two of the deeper samples (135 and 315 ppm).

With the exception of A-8 (1211 ppm), all samples in the central and southern portions of Area A contained PHC at concentrations less than the AL. No PCB was detected in any sample. Total VO concentrations were less than the AL in all samples.

With the exception of zinc, concentrations of metals produced by Metz were above the AL throughout Area A. Silver exceeds the AL in 7 of the 11 locations samples with a maximum of 674 ppm in sample A-7. Cadmium exceeds the AL in 8 of 11 locations with a maximum of 178 ppm in A-10. Copper concentrations above the AL were found in six locations which a maximum concentration of 500 ppm. Nickel concentrations were acceptable at all locations except A-10 which had 160 ppm.

Priority Pollutant metals not produced by Metz were all found at or below AL except for thallium and chromium. Chromium was found above the AL only in sample A-10 at a concentration of 141 ppm. Thallium was found above the AL in nearly all samples within limits of approximately 4 and 10 ppm.

TABLE 3-1

METZ METALLURGICAL CORPORATION

SUMMARY OF ANALYTIC RESULTS - AREA A

PARAMETER	ACTION LEVEL	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-8	A-9	A-10	A-11
Nickel	100	24.2	31.5	38.1	55.6	48.6	49.0	47.2	48.6	48.8	160	58.7
Silver	5	1.5	1.48	1.29	154	11.5	2.56	674	319	78.3	13.2	20
Zinc	350	102	157	190	188	120	148	198	146	100	237	87.6
Cadmium	3	3.40	4.85	2.52	1.89	<0.6	6.2	10.6	22.2	3.8	178	3.51
Copper	170	84.0	126	132	121	192	197	206	184	180	500	132
Thallium	5	4.02	10.1	8.80	7.43	10.3	8.91	7.25	6.58	9.94	5.63	10.7
Arsenic	20	1.82	1.16	0.64	---	---	---	0.903	---	---	0.704	---
Beryllium	---	<1	<1	<1	---	---	---	0.714	---	---	0.962	---
Chromium	100	16.8	18.7	18.2	---	---	---	32.2	---	---	141	---
Lead	100	21.5	17.6	23.0	---	---	---	42.7	---	---	87.6	---
Mercury	1	0.056	0.096	0.078	---	---	---	<0.10	---	---	<0.10	---
Selenium	4	<1	<1	<1	---	---	---	<0.10	---	---	<0.10	---
Antimony	2	<1	<1	<1	---	---	---	<1	---	---	<1	---
PHC	100	270	1852	262	<20	<20	51.9	<20	1211	<20	49.4	<20
PCB	5	<0.01	<0.01	<0.01	---	---	---	<0.01	---	---	<0.01	---
TOTAL VO	1	0.07	<0.01	0.026	0.076	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

NOTES:
(1) Samples collected 4/27/87
(2) Results expressed in mg/kg dry weight basis
(3) All samples collected from 0-0.5 feet EXCEPT VO, from 1.5-2.0 feet
(4) Targeted VO compounds identified are: A-1 - Chlorobenzene; A-3 - Xylene; A-4 - Trichloroethylene
A-5 through A-11 - none

TABLE 3-1-A

METZ METALLURGICAL CORPORATION

SUMMARY OF ANALYTIC RESUTLS - AREA AX SIDEWALL SAMPLES

DEPTH	PARAMETER	ACTION LEVEL	AXSW1	AXSW2	AXSW3
0 - 0.5	PHC	100	421	417	404
	Cd	3	4.03	5.61	7.15
	Tl	5	6.44	7.38	6.24
1.5 - 2	PHC	100	135	71.1	315
	Cd	3	8.68	5.58	7.21
	Tl	5	4.45	6.56	5.34

NOTES:
(1) Samples collected 4/14/87
(2) Results expressed in mg/kg dry weight basis

3.2 Area B

DESCRIPTION - Area B includes the western portion of a driveway, oriented parallel to and located south of building A. Dimensions are approximately 180 feet by 8 feet. A fenced storage area is located to the north and open land designated Area C lies to the south. Area B is paved with asphalt. There is no visible evidence of contamination.

CONCERN - There is no record of discharge of hazardous material in Area B. Environmental concern is based upon identification of drum storage in this area from an aerial photograph taken on December 3, 1979, prior to pavement in the area.

PROPOSED SAMPLING - The NJDEP requested sampling of Area B at three locations for PHC, PCB, VO and PP metals. Environics proposed reduced parameters for two of the three locations based on Area AX samples (see Section 3.1). The proposed depth for collection of PHC samples was 1.5 to 2.0 feet below the asphalt pavement to minimize contamination of the sample with pavement fragments. Test pits were proposed as the method of sample collection. Proposed sampling for Area B was approved without condition.

ACTUAL SAMPLING - Samples were collected in Area B on April 14, 1987. The sample collection method was changed from test pits with sidewall sampling to split spoon. This change was made to minimize destruction of pavement.

Pavement was opened in approximately one foot square cuts by Metz personnel using an impact hammer. Pavement thicknesses encountered were:

B-1 - 0.7 feet, with gravel sub base 1.2 feet;
B-2 - 0.6 feet, no sub base
B-3 - 0.8 feet, no sub base

Pavement cutting was performed prior to the day of sampling. On the sampling day rainwater was found in all three pavement cuts. This was bailed out as thoroughly as possible prior to sampling. Finely crumbled asphalt fragments from the bottom of the pavement cut were removed as well as possible. No hydrocarbon odor was observed in the soil samples.

RESULTS - A summary of analytic results is included in Table 3-2. The laboratory data report is included in Appendix A.

All parameters in Area B were found at or below the Action Level (AL) except thallium in B-2 (7.04 ppm) and PHC in B-3 (169 ppm). The hydrocarbon value probably represents contamination of the sample with asphalt fragments.

TABLE 3-2

METZ METALLURGICAL CORPORATION

SUMMARY OF ANALYTIC RESULTS - AREA B

PARAMETER	ACTION LEVEL	B-1	B-2	B-3
Nickel	100	36.2	33.1	35.6
Silver	5	1.53	3.19	4.91
Zinc	350	76.1	58.4	95.0
Cadmium	3	<1	1.24	1.51
Copper	170	9.82	87.3	24.1
Thallium	5	4.44	7.04	3.94
Arsenic	20		0.89	
Beryllium	---		<0.5	
Chromium	100		14.1	
Lead	100		17.0	
Mercury	1		<0.25	
Selenium	4		<0.25	
Antimony	2		<1.2	
PHC	100	<20	<69.6	169
PCB	5		<0.01	
TOTAL VO	1	0.114	<0.005	<0.005

NOTES:

(1) Samples collected 4/14/87

(2) Results expressed in mg/kg dry weight basis

(3) Sample depths, below pavement surface:

B-1 (Metals) - 1.3'-1.8'; (VO & PHC) - 1.8'-2.2'

B-2 (Metals & PCB) - 0.6'-1.1'; (VO & PHC) - 1.4'-1.9'

B-3 (Metals) - 0.8'-1.3'; (VO & PHC) - 1.5'-2.0'

(4) Targeted VO compounds detected =

B-1 Toluene (0.029), Ethylbenzene (0.017), Xylene (0.068)

B-2 & B-3, none

3.3 Area C

DESCRIPTION - Area C consists of approximately 0.8 acres of unpaved land west of Building B. This field is entirely surrounded by asphalt paved parking and drive areas. Monitor well MW-102 is located at the north central end of the field.

The field designated Area C was purchased by Metz in 1981, along with Building B. Since that time, it has been used only for storage of temporarily out of service equipment.

CONCERN - There is no record of spillage or discharge of hazardous material on Area C. Environmental concern is based upon observation of heavy equipment and possibly drums on the unpaved areas in an aerial photograph taken December 3, 1979 (prior to ownership by Metz).

PROPOSED SAMPLING - Five sample locations were requested by the NJDEP for PHC, PCB, PP metals and VO. There were included unchanged in the Sample Plan. The method proposed was back hoe trench with sidewall samples.

ACTUAL SAMPLING - Samples were collected from Area C on April 1, 1987. The proposed sample method was changed from test pits to split spoon samples for the VO analysis. Soil for VO analysis was collected from the 1.5 to 2.0 foot level. Surface soil (0-0.5 feet) for PHC, PCB, and PP metal analysis was collected with stainless steel trowels.

RESULTS - A summary of analytic results for Area C is presented in Table 3-3. The laboratory report is presented in Appendix A.

All parameters of samples collected in Area C were below action levels (AL) except: (1) silver in samples C-1 through C-3 and C-5 at concentrations between 5 and 7.5 ppm; (2) thallium in all samples at concentrations between 5.7 and 7 ppm; and PHC in sample C-4 at 161 ppm.

TABLE 3-3
METZ METALLURGICAL CORPORATION
SUMMARY OF ANALYTIC RESULTS - AREA C

PARAMETER	ACTION LEVEL	C-1	C-2	C-3	C-4	C-5
Nickel	100	37.4	44.8	35.4	32.6	37.8
Silver	5	5.02	6.13	5.61	4.86	7.41
Zinc	350	91.8	101	88.6	75.5	106
Cadmium	3	0.47	0.51	0.44	0.98	0.86
Copper	170	39.8	32.4	85.1	57.0	51.2
Thallium	5	5.68	6.94	6.08	5.85	6.76
Arsenic	20	2.30	2.15	2.70	2.05	1.18
Beryllium	---	<0.8	<1.0	<0.8	<0.7	<0.8
Chromium	100	23	27.7	22.6	18.7	18.4
Lead	100	43.2	43.0	49.8	44.7	54.0
Mercury	1	0.069	<0.07	<0.06	0.072	<0.07
Selenium	4	0.117	<0.14	<0.12	<0.11	<0.11
Antimony	2	<1.1	<1.4	<1.2	<1.1	<1.1
PHC	100	23.6	28.3	<20	161	36
PCB	5	<0.01	<0.01	<0.01	<0.01	<0.01
TOTAL VO	1	<0.005	<0.005	<0.005	<0.005	<0.005

NOTES:
(1) Samples collected 4/1/87
(2) Results in mg/kg dry weight basis
(3) Sample depths =
Metals, PHC, PCB - 0 - 0.5'
VO - 1.5' - 2.0'
(4) Targeted VO compounds detected = none

3.4 Area D

DESCRIPTION - Area D is an open field of approximately 1.7 acres west of Building A. To the north the field is bounded by a stream which receives a NJPDES permitted outfall. To the south the area is bounded by asphalt paved driveway. On the west the field is bounded by wooden land. A security fence separates the east side of the field from the gravel area which lies between Area D and Building A.

The field is used by Metz only for storage of out of service equipment. Most of the area has been filled with approximately two feet of soil excavated for building construction.

CONCERN - There is no record of spillage or discharge of hazardous material in Area D. Concern was based primarily on observation of dirt piles on the December 3, 1979 aerial photograph. The piles, which originated from the excavation mentioned above have been graded level.

PROPOSED SAMPLING - Six sample locations were proposed for Area D. Two the these were to be collected from the fill and four from underlying soil. One fill sample and one underlying soil sample were to be analyzed for PHC, PCB, PP metals and VO. All other samples were to be analyzed for PCB, VO and the limited metals described in Section 3.1. The proposed sample method was back hoe trench with side wall samples.

ACTUAL SAMPLING - Samples for Area D were collected on April 2, 1987. The sampling method was changed from test pits to split spoon. Surface samples (0-0.5 feet) were collected with a stainless steel trowel. Numerous asphalt fragments were observed in the location of sample D-1.

RESULTS - A summary of analytic results from Area D is presented in Table 3-4. Laboratory data is presented in Appendix A.

Silver concentrations exceeded the AL in all samples from Area D in values between 5.62 and 63.0 ppm. Cadmium exceeded the AL in three of the six locations with a maximum concentration of 13 ppm in sample D-6. The copper concentration in that sample was 336 ppm. All other copper results were below the AL. Thallium values exceeded the AL in all samples with a maximum of 6.74 ppm. No other PP metals were detected above the AL.

No VO compounds or PCB was detected in any sample. PHC was above the AL in three of the six samples with a maximum concentration of 323 ppm in sample D-1.

TABLE 3-4

METZ METALLURGICAL CORPORATION

SUMMARY OF ANALYTIC RESULTS - AREA D

PARAMETER	ACTION LEVEL	D-1	D-2	D-3	D-4	D-5	D-6
Nickel	100	37.4	38.9	31.0	36.5	34.5	32.6
Silver	5	17.5	63.0	16.0	9.0	5.62	9.99
Zinc	350	114	83	95.9	93	73	93.9
Cadmium	3	0.97	6.45	3.40	2.76	2.90	13.0
Copper	170	39.2	157	75.9	79.7	92.3	336
Thallium	5	6.74	5.86	6.6	6	5.36	5.36
Arsenic	20	---	---	2.35	---	---	1.28
Beryllium	---	---	---	<0.8	---	---	<0.8
Chromium	100	---	---	25.8	---	---	22.4
Lead	100	---	---	36.3	---	---	51.4
Mercury	1	---	---	0.469	---	---	0.368
Selenium	4	---	---	<0.1	---	---	<0.10
Antimony	2	---	---	<1	---	---	<1
PHC	100	323	218	<20	132	94.6	54.2
PCB	5	---	---	---	---	---	<0.01
TOTAL VO	1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

NOTES:

(1) Samples collected 4/2/87

(2) Results in mg/kg dry weight basis

(3) Samples D-2 and D-6 collected from fill at the following depths: Metals, PHC, PCB, - 0-0.5'
VO, 1.5' - 2.0'

Samples D-1, D-3, D-4, D-5 collected 0-0.5' below fill depths from ground surface are = D-1 - 1.5' -2.0'; D-3 - 1.5' - 2.0'; D-4 - 2.5' - 3.0'; D-5 - 2.0' - 2.5'

(4) Targeted VO compounds detected = none

3.5 Area E

DESCRIPTION - Area E consists of the bed of a stream which flows westward along the northern property line. Flow in this stream is primarily storm water and non-contact cooling water authorized under NJPDES permit NJ 0034835. Rip rap has been placed for approximately 35 feet downstream from the NJPDES outfall.

CONCERN - There are two concerns for the environmental integrity of Area E. The primary concern is the extent of contamination from a spill of silver chloride which occurred on February 14, 1986. This spill was described in Item 13 of the Site Evaluation Submission. The secondary concern is residue from past discharges of VO compounds.

PROPOSED SAMPLING - The extent of contamination sampling proposed for Area E consisted of 26 samples downstream and 1 upstream from the outfall, to be analyzed for silver. Ten downstream sample stations were selected to a maximum distance of 300 feet from the outfall. At each station a centerline sample of the stream sediment (0-0.1 foot) was proposed. Vertical samples (along the centerline at a depth of 0.5 to 0.1 feet) and horizontal samples (from the north and south banks at 0 to 0.5 feet) were proposed at selected stations. A single sample for PP plus 40 was proposed from the stream centerline just downstream from the rip rap to evaluate any possible residual VO contamination.

The proposed sampling method was direct collection of sediment with scoops, probes and trowels.

ACTUAL SAMPLING - Area E was sampled on April 23, 1987. Sampling began at the downstream end, in order to minimize the effects of disruption of the stream sediment. All north and south samples were collected with trowels. Centerline and vertical samples were collected with a stainless steel bucket auger. No samples were collected from the 0 + 10 CL and 0 + 10 S locations, due to the presence of rip rap.

RESULTS - A summary of analytic results from the extent of contamination sampling is presented in Table 3-5. Table 3-5-A contains a summary of the PP plus 40 data. Laboratory reports are included in Appendix A.

Silver concentrations above the AL were found at all station including upstream. The source of upstream contamination is not known at this time. The most likely source is from the catalyst loading area located on the north driveway. Drainage from the north driveway flows into the stream upstream from the outfall. The full

horizontal extent of contamination has not been determined. However, based on the geometry of the stream channel, the limit of silver contamination is not likely to be more than a few feet outside the present sample locations. The vertical samples indicate that the depth of silver contamination is approximately one foot. Post cleanup sampling will be adequate for verification of vertical and horizontal limits of contamination.

With the exception of copper and silver, no elements or compounds in the PP plus 40 samples were detected above AL. There is no record of a discharge of copper into this stream. However, copper will be included in any future samplings.

TABLE 3-5

METZ METALLURGICAL CORPORATION

SUMMARY OF ANALYTIC RESULTS - AREA E (SILVER)

STATION	NORTH (0-0.1)	CENTER (0-0.1)	VERTICAL (0.5-1)	SOUTH (0-0.1)
0-50	---	1019	---	---
0+00	---	9458	---	---
0+10	282	---	---	---
0+20	---	584	---	---
0+40	1272	32.5	2.97	265
0+60	---	268	---	---
0+80	364	2053	---	19.9
0+110	---	2730	---	---
0+160	490	157	2.67	24.3
0+220	2071	1648	---	187
0+300	286	2304	5.48	30.7

NOTES:
(1) Samples collected 4/23/87
(2) Results in mg/kg dry weight basis
(3) Collection depths for North, Center, Vertical, and South Samples in feet as indicated in table

TABLE 3-5-A

METZ METALLRGICAL CORPORATION

SUMMARY OF ANALYTIC RESULTS - AREA E (PP + 40)

PARAMETER	ACTION LEVEL	STATION 0+35 CL (0-0.5)
Nickel	100	31.9
Silver	5	99.5
Zinc	350	141
Cadmium	3	1.42
Copper	170	870
Thallium	5	1.96
Arsenic	20	2.05
Beryllium	---	0.750
Chromium	100	12.3
Lead	100	30.9
Mercury	1	0.262
Selenium	4	<0.10
Antimony	2	<1.0
Cyanide	12	0.269
Phenol	---	2.50
Total VO	1	<0.005
Total AE	---	<0.2
Total B/N	10	<0.2

NOTES:
(1) Sample collected 4/23/87
(2) Results in mg/kg dry weight basis
(3) Sample depth for all parameters = 0-0.5 feet
(4) Targeted VO, AE or B/N compounds detected = none

3.6 Area F

DESCRIPTION - Area F is a portion of an asphalt paved parking area adjacent to the north wall of Building B.

CONCERN - An underground storage tank was removed from Area F prior to purchase of the property by Metz in 1981. No record exists of the integrity of this tank.

PROPOSED SAMPLING - Five boring samples were proposed in a standard NJDEP tank integrity test pattern. Proposed sample depth was 6.0 to 6.5 feet or at bedrock. Parameters proposed were PHC from all samples and Base/Neutrals organics plus 15 (B/N) from the center boring. As a condition of approval of the sample plan, the NJDEP requested that the B/N sample be selected by positive bias or be taken from the sample location nearest to the end of the tank where product pipe lines were connected.

ACTUAL SAMPLING - Samples from Area F were collected on April 14 and 15, 1987. A hand driven split spoon was used through pavement holes cut by Metz employees. Pavement thickness was measured at 0.6 to 0.7 feet.

No sample was collected at location F-3. The boring reached refusal at 1.9 feet, which was probably caused by a portion of the footing for Building B. Since F-3 was less than three feet from F-5, a field decision was made to abandon that sample.

The former product pipelines were located at the end nearest sample F-2. Sufficient recovery was obtained from the 6.0 to 6.5 foot increment to fill two vials (40 ml each) for PHC and one jar (8 ounce) for B/N. These were held in the event that no positively bias ' sample would be collected. Since no staining or odor wa .etected in any sample, the B/N fraction was analyzed rrom sample F-2.

RESULTS - A summary of analytic results from Area F samples is presented in Table 3-6. Laboratory data is presented in Appendix A.

All PHC samples were below the AL except at sample F-5, which had 2406 ppm. No B/N compounds were detected at a limit of 2 ppm. No staining or odor were observed in F-5. Since no contamination was found in samples F-1, F-2, and F-4, at a maximum distance of 4.0 feet from F-5, it is likely that the F-5 result was from asphalt contamination of the sample.

TABLE 3-6

METZ METALLURGICAL CORPORATION

SUMMARY OF ANALYTIC RESULTS - AREA F

PARAMETER	ACTION LEVEL	F-1	F-2	F-3	F-4	F-5
PHC	100	46.6	93.2	---	<20	2406
Total B/N	10	---	<2	---	---	---

NOTES:
(1) Samples collected 4/14 and 4/15/87
(2) Results in mg/kg dry weight basis
(3) Sample depth, all samples = 6.0 - 6.5 feet
(4) Targeted B/N compounds detected = none

3.7 Area G

DESCRIPTION - The designation Area G was not included in the approved Sample Plan. The area is a portion of the north driveway which extends from 50 feet east to 50 feet west of monitor well MW-105, as defined in Item 10 of the February 18, 1987 Conditional Approval. This area is shown on Drawing 1004.

CONCERN - Area G was defined by NJDEP as the location for soil samples to corroborate previously submitted groundwater data. The specific concern was concentrations of VO compounds found in groundwater samples.

PROPOSED SAMPLING - The sampling protocol for Area G was proposed by the NJDEP. It was to include four borings surrounding well MW-105 as shown on Drawing 1004. Sample depths were to be 1.5 to 2.0 feet and 3.5 to 4.0 feet or just above bedrock. Parameters were to be a VO scan to include trichlorofluoromethane and xylene.

ACTUAL SAMPLING - Area G was sampled on April 15, 1987. Samples were taken with a hand driven split spoon from the locations requested. A shallow sample only was collected at G-2 due to refusal (bedrock) at 1.9 feet. No recovery was obtained in the first spoon driven at G-4. Two samples were collected from the second spoon from approximate depths of 2.0 to 2.5 and 3.0 to 3.5 feet.

RESULTS - A summary of analytic results for Area G is presented in Table 3-7. Laboratory data is presented in Appendix A. No VO compounds were detected in any sample.

TABLE 3-7

METZ METALLURGICAL CORPORATION

SUMMARY OF ANALYTIC RESULTS - AREA G

SAMPLE	DEPTH	TOTAL VO COMPOUNDS
G-1-a	1.5'-2.0'	<0.005
G-1-b	2.9'-3.4'	<0.005
G-2-a	1.4'-1.9'	<0.005
G-2-b	------	------
G-3-a	1.5'-2.0'	<0.005
G-3-b	3.0'-3.5'	<0.005
G-4-a	2.0'-2.5'	<0.005
G-4-b	3.0'-3.5'	<0.005

NOTES:
(1) Samples collected 4/15/87
(2) Results expressed in mg/kg dry weigh basis
(3) Targeted VO compounds detected = none

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

The following conclusions can be drawn from the analytic results of the sample program conducted at Metz:

1. The sediment in the NJPDES permitted stream bed (Area E) is highly contaminated with silver. A sample from the center of the stream bed directly in line with the outfall contained nearly one percent silver. Lower concentrations were found up stream and down stream. The former probably resulted from previous run off from a catalyst loading area.

2. Copper concentration is Area E was found in excess of action levels. No other Priority Pollutant, organic or inorganic, was detected above action level.

3. Concentrations of silver and cadmium exceed action levels throughout most of Areas A, C. and D. Copper and nickel exceed action levels in a few samples from Area A. In general, the concentrations of contamination decrease markedly with distance between Area A and Area D. Based on the samples collected to date, concentrations in excess of action level are likely in virtually any of the previously sampled locations.

   No known release of silver or cadmium is responsible for the contamination. The most likely source is accumulation of residual material from equipment removed from the building and stored outside, on Areas A, C, and D. Most such equipment has been stored in Areas A and D. This is probably the reason that contamination levels are greater in these areas than in Area C.

4. Concentrations of thallium exceed the action level in almost all samples collected. The variation in concentration appears to represent a normal distribution. No thallium has ever been used at Metz. It is assumed that concentrations observed represent background conditions.

5. No contamination was found in Area B. Two values were observed above action levels - thallium and petroleum hydrocarbon. Thallium represents background. The PHC value (169 ppm) observed in

a sample collected from below asphalt pavement does not represent contamination.

6. One value of PHC was found in excess of action levels in Area F. This location was surrounded on three sides within four feet by samples below the action level. On the fourth side is a building wall. No odor or staining was observed in any of the samples, and no B/N compounds were detected. The one value is assumed to have been the result of asphalt fragments.

7. No volatile compounds were detected in Area G, in the samples requested for corroboration of previously submitted data concerning VO contamination of groundwater. This supports the conclusion that VO contamination of the groundwater originates from off-site.

4.2 Proposed Action

The following actions will be required at Metz:

1. A supplemental sample plan will be required in order to define the horizontal extent of contamination. The plan will be submitted as a separate document. However, proposed sample locations and parameters are included on Drawing 1005, along with a summary of maximum concentrations of the parameters of concern. Based on drainage patterns (as shown on the drawing) it is unlikely that contamination has migrated past the perimeter. Thallium will be included in the analysis to confirm background concentration of this element.

2. A cleanup plan will be required for concentrations of silver, cadmium, and copper in Areas A, C, D, and E. Metz is currently conducting feasibility studies for on-site recovery of the metals from the stream bed and soil. The cleanup plan will be prepared and submitted when process development has been tested. If the process is technically feasible, exact delineation of vertical and horizontal extent of contamination will be unnecessary, except for perimeter samples as described above. All exposed soil within the perimeter would be assumed contaminated to the bedrock surface (average depth, approximately five feet). The conceptual plan for cleanup includes excavation of soil, recovery of metals, followed by replacement, grading and pavement.

APPENDIX A

Metz Metallurgical Corporation

Laboratory Analytic Data,

Quality Assurance &
Chain of Custody

environics incorporated/environmental consultants
46 JACKSON DRIVE • CRANFORD, NJ 07016-3680 • (201) 272-3770

GARDEN STATE LABORATORIES, INC.

Bacteriological and Chemical Testing
399 Stuyvesant Avenue
Irvington, N.J. 07111

Telephone
201-373-8007

MATHEW KLEIN, M.S., Director
HARVEY KLEIN, M.S., Lab Supervisor

ENVIRONICS, INC.
4[redacted] JACKSON DRIVE
C[redacted]NFORD, NJ 07016

S[redacted]PLES SUBMITTED: TUES. APRIL 28, 1987

SOIL SAMPLES RE: METZ METALLURGICAL CORP.
S[redacted]TH PLAINFILED E-1117 4/27/87

RESULTS ARE IN MG/KG DRY WEIGHT BASIS.

	A-4 0-0.5'	A-5 0-0.5'	A-6 0-0.5'	A-8 0-0.5'	A-9 0-0.5'	A-11 0-0.5'
PETROLEUM HYDROCARBON	<20.0	<20.0	51.9	1,211.	<20.0	<20.0
N[redacted]KEL	55.6	48.6	49.0	48.6	48.8	58.7
SILVER	154.	11.5	2.56	319.	78.3	20.0
Z[redacted]NC	188.	120.	148.	146.	100.	87.6
C[redacted]DMIUM	1.89	<0.60	6.20	22.2	3.80	3.51
COPPER	121.	192.	197.	184.	180.	132.
T[redacted]LLIUM	7.43	10.3	8.91	6.58	9.94	10.7

THE LIABILITY OF GARDEN STATE LABORATORIES, INC. FOR SERVICES RENDERED SHALL IN NO EVENT EXCEED THE AMOUNT OF THE INVOICE.
Certified by U.S. Public Health Service, N.J. Dept. of Health and N.J.D.E.P.—Lab #07044

GARDEN STATE LABORATORIES, INC.

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Telephone
201-373-8007

ENVIRONICS, INC.
46 JACKSON DRIVE
CRANFORD, NJ 07016

SAMPLES SUBMITTED: TUES. APRIL 28, 1987

SOIL SAMPLES RE: METZ METALLURGICAL CORP.
SOUTH PLAINFIELD E-1117 4/27/87

RESULTS ARE IN MG/KG DRY WEIGHT BASIS.

	A-7 0-0.5'	A-10 0-0.5'
PETROLEUM HYDROCARBON	<20.0	49.4
POLYCHLORINATED BIPHENYLS	<0.01	<0.01
ARSENIC	0.903	0.704
BERYLLIUM	0.714	0.962
CADMIUM	10.6	178.
CHROMIUM	32.2	141.
COPPER	206.	500.
LEAD	42.7	87.6
MERCURY	<0.10	<0.10
SILVER	674.	13.2
SELENIUM	<0.10	<0.10
NICKEL	47.2	160.
ANTIMONY	<1.0	<1.0
THALLIUM	7.25	5.63
ZINC	198.	237.

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Certified by U.S. Public Health Service, N.J. Dept. of Health and N.J.D.E.P.—Lab #07044

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Telephone
201-373-8007

REPORT OF VOLATILE ORGANIC ANALYSIS

TO: ENVIRONICS
46 JACKSON DRIVE

CRANFORD NJ 07016

ATT:

REPORT # 70428156
CLIENT # ENV01
DATE SUBMITTED: 4/28/87

SAMPLE TYPE: SOIL
SAMPLE ID: A-4 ; 1.5'-2.0'
SAMPLE LOCATION: PROJECT NAME: METZ METALLURGICAL CORP. NO. E-1117

DATE SAMPLED: 4/27/87 TIME SAMPLED: 1500

COMPOUND	RESULT	COMPOUND	RESULT
Chloromethane	<5.0	1,1,2 Trichloroethane	<5.0
Bromomethane	<5.0	cis-1,3 Dichloropropylene	<5.0
Dichlorodifluoromethane	<5.0	Benzene	<5.0
Vinyl Chloride	<5.0	2-Chloroethylvinyl ether	<5.0
Chloroethane	<5.0	Bromoform	<5.0
Methylene Chloride	<5.0	1,1,2,2 Tetrachloroethane	<5.0
Trichlorofluoromethane	<5.0	Tetrachloroethylene	<5.0
1,1 Dichloroethylene	<5.0	Toluene	<5.0
1,1 Dichloroethane	<5.0	Chlorobenzene	<5.0
trans-1,2 Dichloroethlylene	<5.0	Ethylbenzene	<5.0
Chloroform	<5.0	p-Xylene	<5.0
1,2 Dichloroethane	<5.0	m-Xylene	<5.0
1,1,1 Trichloroethane	<5.0	o-Xylene	<5.0
Carbon Tetrachloride	<5.0	1,2 Dichlorobenzene	<5.0
Bromodichloromethane	<5.0	1,3 Dichlorobenzene	<5.0
1,2 Dichloropropene	<5.0	1,4 Dichlorobenzene	<5.0
trans-1,3 Dichloropropene	<5.0	1,2,4 Trichlorobenzene	---
Trichloroethlyene	75.7	DATE OF ANALYSIS	5/7/87
Dibromochloromethane	<5.0		
Methyl tert-Butyl Ether	<5.0		
Isopropyl Ether	<5.0		

RESULTS ARE IN UG/KG IN DRY WEIGHT.
<=LESS THAN, NONE DETECTED. ANALYSIS PERFORMED BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY
USEPA METHOD 624.

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GARDEN STATE LABORATORIES, INC.

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201-373-8007

MATHEW KLEIN, M.S., Director
HARVEY KLEIN, M.S., Lab. Supervisor

REPORT OF VOLATILE ORGANIC ANALYSIS

TO: ENVIRONICS
46 JACKSON DRIVE

CRANFORD NJ 07016

ATT:

REPORT # 70428158
CLIENT # ENV01
DATE SUBMITTED: 4/28/87

SAMPLE TYPE: SOIL
SAMPLE ID: A-5; 1.5-2.0
SAMPLE LOCATION: PROJECT NAME: METZ METALLURGICAL CORP. NO. E-1117

DATE SAMPLED: 4/27/87 TIME SAMPLED: 1445

COMPOUND	RESULT	COMPOUND	RESULT
Chloromethane	<5.0	1,1,2 Trichloroethane	<5.0
Bromomethane	<5.0	cis-1,3 Dichloropropylene	<5.0
Dichlorodifluoromethane	<5.0	Benzene	<5.0
Vinyl Chloride	<5.0	2-Chloroethylvinyl ether	<5.0
Chloroethane	<5.0	Bromoform	<5.0
Methylene Chloride	<5.0	1,1,2,2 Tetrachloroethane	<5.0
Trichlorofluoromethane	<5.0	Tetrachloroethylene	<5.0
1,1 Dichloroethylene	<5.0	Toluene	<5.0
1,1 Dichloroethane	<5.0	Chlorobenzene	<5.0
trans-1,2 Dichloroethylene	<5.0	Ethylbenzene	<5.0
Chloroform	<5.0	p-Xylene	<5.0
1,2 Dichloroethane	<5.0	m-Xylene	<5.0
1,1,1 Trichloroethane	<5.0	o-Xylene	<5.0
Carbon Tetrachloride	<5.0	1,2 Dichlorobenzene	<5.0
Bromodichloromethane	<5.0	1,3 Dichlorobenzene	<5.0
1,2 Dichloropropane	<5.0	1,4 Dichlorobenzene	<5.0
trans-1,3 Dichloropropene	<5.0	1,2,4 Trichlorobenzene	---
Trichloroethylene	<5.0	DATE OF ANALYSIS	5/7/87
Dibromochloromethane	<5.0		
Methyl tert-Butyl Ether	<5.0		
Isopropyl Ether	<5.0		

RESULTS ARE IN UG/KG IN DRY WEIGHT.
<=LESS THAN, NONE DETECTED. ANALYSIS PERFORMED BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY USEPA METHOD 624.

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REPORT OF VOLATILE ORGANIC ANALYSIS

REPORT # 70428161
CLIENT # ENV01
DATE SUBMITTED: 4/28/87

TO: ENVIRONICS
46 JACKSON DRIVE

CRANFORD NJ 07016

ATT:

SAMPLE TYPE: SOIL
SAMPLE ID: A-6; 1.5-2.0
SAMPLE LOCATION: PROJECT NAME: METZ METALLURGICAL CORP. NO. E-1117

DATE SAMPLED: 4/27/87 TIME SAMPLED: 1430

COMPOUND	RESULT	COMPOUND	RESULT
Chloromethane	<5.0	1,1,2 Trichloroethane	<5.0
Bromomethane	<5.0	cis-1,3 Dichloropropylene	<5.0
Dichlorodifluoromethane	<5.0	Benzene	<5.0
Vinyl Chloride	<5.0	2-Chloroethylvinyl ether	<5.0
Chloroethane	<5.0	Bromoform	<5.0
Methylene Chloride	<5.0	1,1,2,2 Tetrachloroethane	<5.0
Trichlorofluoromethane	<5.0	Tetrachloroethylene	<5.0
1,1 Dichloroethylene	<5.0	Toluene	<5.0
1,1 Dichloroethane	<5.0	Chlorobenzene	<5.0
trans-1,2 Dichloroethylene	<5.0	Ethylbenzene	<5.0
Chloroform	<5.0	p-Xylene	<5.0
1,2 Dichloroethane	<5.0	m-Xylene	<5.0
1,1,1 Trichloroethane	<5.0	o-Xylene	<5.0
Carbon Tetrachloride	<5.0	1,2 Dichlorobenzene	<5.0
Bromodichloromethane	<5.0	1,3 Dichlorobenzene	<5.0
1,2 Dichloropropane	<5.0	1,4 Dichlorobenzene	<5.0
trans-1,3 Dichloropropene	<5.0	1,2,4 Trichlorobenzene	---
Trichloroethylene	<5.0	DATE OF ANALYSIS	5/7/87
Dibromochloromethane	<5.0		
Methyl tert-Butyl Ether	<5.0		
Isopropyl Ether	<5.0		

RESULTS ARE IN UG/KG IN DRY WEIGHT.
<=LESS THAN, NONE DETECTED. ANALYSIS PERFORMED BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY USEPA METHOD 624.

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REPORT OF VOLATILE ORGANIC ANALYSIS

REPORT # 70428169
CLIENT # ENV01
DATE SUBMITTED: 4/28/87

TO: ENVIRONICS
46 JACKSON DRIVE

CRANFORD NJ 07016

ATT:

SAMPLE TYPE: SOIL
SAMPLE ID: A-7; 1.5-2.0
SAMPLE LOCATION: PROJECT NAME: METZ METALLURGICAL CORP. NO. E-1117

DATE SAMPLED: 4/27/87 TIME SAMPLED: 1420

COMPOUND	RESULT	COMPOUND	RESULT
Chloromethane	<5.0	1,1,2 Trichloroethane	<5.0
Bromomethane	<5.0	cis-1,3 Dichloropropylene	<5.0
Dichlorodifluoromethane	<5.0	Benzene	<5.0
Vinyl Chloride	<5.0	2-Chloroethylvinyl ether	<5.0
Chloroethane	<5.0	Bromoform	<5.0
Methylene Chloride	<5.0	1,1,2,2 Tetrachloroethane	<5.0
Trichlorofluoromethane	<5.0	Tetrachloroethylene	<5.0
1,1 Dichloroethylene	<5.0	Toluene	<5.0
1,1 Dichloroethane	<5.0	Chlorobenzene	<5.0
trans-1,2 Dichloroethylene	<5.0	Ethylbenzene	<5.0
Chloroform	<5.0	p-Hylene	<5.0
1,2 Dichloroethane	<5.0	m-Hylene	<5.0
1,1,1 Trichloroethane	<5.0	o-Hylene	<5.0
Carbon Tetrachloride	<5.0	1,2 Dichlorobenzene	<5.0
Bromodichloromethane	<5.0	1,3 Dichlorobenzene	<5.0
1,2 Dichloropropane	<5.0	1,4 Dichlorobenzene	<5.0
trans-1,3 Dichloropropene	<5.0	1,2,4 Trichlorobenzene	---
Trichloroethylene	<5.0	DATE OF ANALYSIS	5/8/87
Dibromochloromethane	<5.0		
Methyl tert-Butyl Ether	<5.0		
Isopropyl Ether	<5.0		

RESULTS ARE IN UG/KG IN DRY WEIGHT.
<=LESS THAN, NONE DETECTED. ANALYSIS PERFORMED BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY USEPA METHOD 624.

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REPORT OF VOLATILE ORGANIC ANALYSIS

TO: ENVIRONICS
46 JACKSON DRIVE

CRANFORD NJ 07016

ATT:

REPORT # 70428163
CLIENT # ENV01
DATE SUBMITTED: 4/28/87

SAMPLE TYPE: SOIL
SAMPLE ID: A-8; 1.5-2.0
SAMPLE LOCATION: PROJECT NAME: METZ METALLURGICAL CORP. NO. E-1117

DATE SAMPLED: 4/27/87 TIME SAMPLED: 1405

COMPOUND	RESULT	COMPOUND	RESULT
Chloromethane	<5.0	1,1,2 Trichloroethane	<5.0
Bromomethane	<5.0	cis-1,3 Dichloropropylene	<5.0
Dichlorodifluoromethane	<5.0	Benzene	<5.0
Vinyl Chloride	<5.0	2-Chloroethylvinyl ether	<5.0
Chloroethane	<5.0	Bromoform	<5.0
Methylene Chloride	<5.0	1,1,2,2 Tetrachloroethane	<5.0
Trichlorofluoromethane	<5.0	Tetrachloroethylene	<5.0
1,1 Dichloroethylene	<5.0	Toluene	<5.0
1,1 Dichloroethane	<5.0	Chlorobenzene	<5.0
trans-1,2 Dichloroethylene	<5.0	Ethylbenzene	<5.0
Chloroform	<5.0	p-Xylene	<5.0
1,2 Dichloroethane	<5.0	m-Xylene	<5.0
1,1,1 Trichloroethane	<5.0	o-Xylene	<5.0
Carbon Tetrachloride	<5.0	1,2 Dichlorobenzene	<5.0
Bromodichloromethane	<5.0	1,3 Dichlorobenzene	<5.0
1,2 Dichloropropane	<5.0	1,4 Dichlorobenzene	<5.0
trans-1,3 Dichloropropene	<5.0	1,2,4 Trichlorobenzene	---
Trichloroethylene	<5.0	DATE OF ANALYSIS	5/7/87
Dibromochloromethane	<5.0		
Methyl tert-Butyl Ether	<5.0		
Isopropyl Ether	<5.0		

RESULTS ARE IN UG/KG IN DRY WEIGHT.
<=LESS THAN, NONE DETECTED. ANALYSIS PERFORMED BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY USEPA METHOD 624.

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REPORT OF VOLATILE ORGANIC ANALYSIS

TO: ENVIRONICS
46 JACKSON DRIVE

CRANFORD NJ 07016

ATT:

REPORT # 70428165
CLIENT # ENV01
DATE SUBMITTED: 4/28/87

SAMPLE TYPE: SOIL
SAMPLE ID: A-9; 1.5-2.0
SAMPLE LOCATION: PROJECT NAME: METZ METALLURGICAL CORP. NP. E-1117

DATE SAMPLED: 4/27/87 TIME SAMPLED: 1350

COMPOUND	RESULT	COMPOUND	RESULT
Chloromethane	<5.0	1,1,2 Trichloroethane	<5.0
Bromomethane	<5.0	cis-1,3 Dichloropropylene	<5.0
Dichlorodifluoromethane	<5.0	Benzene	<5.0
Vinyl Chloride	<5.0	2-Chloroethylvinyl ether	<5.0
Chloroethane	<5.0	Bromoform	<5.0
Methylene Chloride	<5.0	1,1,2,2 Tetrachloroethane	<5.0
Trichlorofluoromethane	<5.0	Tetrachloroethylene	<5.0
1,1 Dichloroethylene	<5.0	Toluene	<5.0
1,1 Dichloroethane	<5.0	Chlorobenzene	<5.0
trans-1,2 Dichloroethlylene	<5.0	Ethylbenzene	<5.0
Chloroform	<5.0	p-Xylene	<5.0
1,2 Dichloroethane	<5.0	m-Xylene	<5.0
1,1,1 Trichloroethane	<5.0	o-Xylene	<5.0
Carbon Tetrachloride	<5.0	1,2 Dichlorobenzene	<5.0
Bromodichloromethane	<5.0	1,3 Dichlorobenzene	<5.0
1,2 Dichloropropene	<5.0	1,4 Dichlorobenzene	<5.0
trans-1,3 Dichloropropene	<5.0	1,2,4 Trichlorobenzene	---
Trichloroethlyene	<5.0	DATE OF ANALYSIS	5/8/87
Dibromochloromethane	<5.0		
Methyl tert-Butyl Ether	<5.0		
Isopropyl Ether	<5.0		

RESULTS ARE IN UG/KG IN DRY WEIGHT.
<=LESS THAN, NONE DETECTED. ANALYSIS PERFORMED BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY USEPA METHOD 624.

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REPORT OF VOLATILE ORGANIC ANALYSIS

TO: ENVIRONICS
46 JACKSON DRIVE

CRANFORD NJ 07016

ATT:

REPORT # 70428171
CLIENT # ENV01
DATE SUBMITTED: 4/28/87

SAMPLE TYPE: SOIL
SAMPLE ID: A-10; 1.5-2.0
SAMPLE LOCATION: PROJECT NAME: METZ METALLURGICAL CORP. NO. E-1117

DATE SAMPLED: 4/27/87 TIME SAMPLED: 1333

COMPOUND	RESULT
Chloromethane	<5.0
Bromomethane	<5.0
Dichlorodifluoromethane	<5.0
Vinyl Chloride	<5.0
Chloroethane	<5.0
Methylene Chloride	<5.0
Trichlorofluoromethane	<5.0
1,1 Dichloroethylene	<5.0
1,1 Dichloroethane	<5.0
trans-1,2 Dichloroethlylene	<5.0
Chloroform	<5.0
1,2 Dichloroethane	<5.0
1,1,1 Trichloroethane	<5.0
Carbon Tetrachloride	<5.0
Bromodichloromethane	<5.0
1,2 Dichloropropane	<5.0
trans-1,3 Dichloropropene	<5.0
Trichloroethlyene	<5.0
Dibromochloromethane	<5.0
Methyl tert-Butyl Ether	<5.0
Isopropyl Ether	<5.0

COMPOUND	RESULT
1,1,2 Trichloroethane	<5.0
cis-1,3 Dichloropropylene	<5.0
Benzene	<5.0
2-Chloroethylvinyl ether	<5.0
Bromoform	<5.0
1,1,2,2 Tetrachloroethane	<5.0
Tetrachloroethylene	<5.0
Toluene	<5.0
Chlorobenzene	<5.0
Ethylbenzene	<5.0
p-Hylene	<5.0
m-Hylene	<5.0
o-Hylene	<5.0
1,2 Dichlorobenzene	<5.0
1,3 Dichlorobenzene	<5.0
1,4 Dichlorobenzene	<5.0
1,2,4 Trichlorobenzene	---
DATE OF ANALYSIS	5/8/87

ESULTS ARE IN UG/KG IN DRY WEIGHT.
-LESS THAN, NONE DETECTED. ANALYSIS PERFORMED BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY
SEPA METHOD 624.

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REPORT OF VOLATILE ORGANIC ANALYSIS

TO: ENVIRONICS
46 JACKSON DRIVE

CRANFORD NJ 07016

ATT:

REPORT # 70428167
CLIENT # ENV01
DATE SUBMITTED: 4/28/87

SAMPLE TYPE: SOIL
SAMPLE ID: A-11; 1.5-2.0
SAMPLE LOCATION: PROJECT NAME: METZ METALLURGICAL CORP. NO. E-1117

DATE SAMPLED: 4/27/87 TIME SAMPLED: 1320

COMPOUND	RESULT
Chloromethane	<5.0
Bromomethane	<5.0
Dichlorodifluoromethane	<5.0
Vinyl Chloride	<5.0
Chloroethane	<5.0
Methylene Chloride	<5.0
Trichlorofluoromethane	<5.0
1,1 Dichloroethylene	<5.0
1,1 Dichloroethane	<5.0
trans-1,2 Dichloroethylene	<5.0
Chloroform	<5.0
1,2 Dichloroethane	<5.0
1,1,1 Trichloroethane	<5.0
Carbon Tetrachloride	<5.0
Bromodichloromethane	<5.0
1,2 Dichloropropane	<5.0
trans-1,3 Dichloropropene	<5.0
Trichloroethlyene	<5.0
Dibromochloromethane	<5.0
Methyl tert-Butyl Ether	<5.0
Isopropyl Ether	<5.0

COMPOUND	RESULT
1,1,2 Trichloroethane	<5.0
cis-1,3 Dichloropropylene	<5.0
Benzene	<5.0
2-Chloroethylvinyl ether	<5.0
Bromoform	<5.0
1,1,2,2 Tetrachloroethane	<5.0
Tetrachloroethylene	<5.0
Toluene	<5.0
Chlorobenzene	<5.0
Ethylbenzene	<5.0
p-Xylene	<5.0
m-Xylene	<5.0
o-Xylene	<5.0
1,2 Dichlorobenzene	<5.0
1,3 Dichlorobenzene	<5.0
1,4 Dichlorobenzene	<5.0
1,2,4 Trichlorobenzene	---
DATE OF ANALYSIS	5/8/87

RESULTS ARE IN UG/KG IN DRY WEIGHT.
<=LESS THAN, NONE DETECTED. ANALYSIS PERFORMED BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY USEPA METHOD 624.

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MATHEW KLEIN, M.S., Director
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ENVIRONICS, INC.
46 JACKSON DRIVE
CRANFORD, NJ 07016

SAMPLES SUBMITTED: WED. APRIL 15, 1987

SOIL SAMPLES RE: METZ METALLURGICAL CORP. E-1117 APRIL 14, 1987

RESULTS ARE IN MG/KG DRY WEIGHT BASIS.

		PETROLEUM HYDROCARBON	CADMIUM	THALLIUM
AXSW1	0-0.5'	421.	4.03	6.44
AXSW1	1.5'-2.0'	135.	8.68	4.45
AXSW2	0-0.5'	417.	5.61	7.38
AXSW2	1.5'-2.0'	71.1	5.58	6.56
AXSW3	0-0.5'	404.	7.15	6.24
AXSW3	1.5'-2.0'	315.	7.21	5.34
F1	6.0'-6.5'	46.6	---	---

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ENVIRONICS, INC.
46 JACKSON DRIVE
CRANFORD, NJ 07016

SAMPLES SUBMITTED: WED. APRIL 15, 1987

SOIL SAMPLES RE: METZ METTALLURGICAL CORP. E-1117 APRIL 14, 1987

RESULTS ARE IN MG/KG DRY WEIGHT BASIS.

	B-1	B-3
PETROLEUM HYDROCARBON	<20.0	169.
NICKEL	36.2	35.6
SILVER	1.53	4.91
ZINC	76.1	95.0
CADMIUM	<1.0	1.51
COPPER	9.82	24.1
THALLIUM	4.44	3.94

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ENVIRONICS, INC.
46 JACKSON DRIVE
CRANFORD, NJ 07016

SAMPLES SUBMITTED: WED. APRIL 15, 1987

B-2
SOIL SAMPLE RE: METZ METALLURGICAL CORP. E-1117 APRIL 14, 1987

RESULTS ARE IN MG/KG DRY WEIGHT BASIS.

PETROLEUM HYDROCARBON	69.6
POLYCHLORINATED BIPHENYLS	<0.01
ARSENIC	0.89
BERYLLIUM	<0.5
CADMIUM	1.24
CHROMIUM	14.1
COPPER	87.3
LEAD	17.0
MERCURY	<0.25
SILVER	3.19
SELENIUM	<0.25
NICKEL	33.1
ANTIMONY	<1.2
THALLIUM	7.04
ZINC	58.4

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MATHEW KLEIN, M.S., Director
HARVEY KLEIN, M.S., Lab. Supervisor

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REPORT OF VOLATILE ORGANIC ANALYSIS

TO: ENVIRONICS
46 JACKSON DRIVE

CRANFORD NJ 07016

ATT:

REPORT # 70415023
CLIENT # ENV01
DATE SUBMITTED: 4/15/87

SAMPLE TYPE: SOIL
SAMPLE ID: B-1
SAMPLE LOCATION: PROJECT NO. E-1117 NAME: METZ METALLURGICAL CORP.

DATE SAMPLED: 4/14/87 TIME SAMPLED: 12:15

COMPOUND	RESULT
Chloromethane	<5.0
Bromomethane	<5.0
Dichlorodifluoromethane	<5.0
Vinyl Chloride	<5.0
Chloroethane	<5.0
Methylene Chloride	<5.0
Trichlorofluoromethane	<5.0
1,1 Dichloroethylene	<5.0
1,1 Dichloroethane	<5.0
trans-1,2 Dichloroethlylene	<5.0
Chloroform	<5.0
1,2 Dichloroethane	<5.0
1,1,1 Trichloroethane	<5.0
Carbon Tetrachloride	<5.0
Bromodichloromethane	<5.0
1,2 Dichloropropane	<5.0
trans-1,3 Dichloropropene	<5.0
Trichloroethlyene	<5.0
Dibromochloromethane	<5.0
Methyl tert-Butyl Ether	<5.0
Isopropyl Ether	<5.0

COMPOUND	RESULT
1,1,2 Trichloroethane	<5.0
cis-1,3 Dichloropropylene	<5.0
Benzene	<5.0
2-Chloroethylvinyl ether	<5.0
Bromoform	<5.0
1,1,2,2 Tetrachloroethane	<5.0
Tetrachloroethylene	<5.0
Toluene	28.6
Chlorobenzene	<5.0
Ethylbenzene	17.3
p-Xylene	---
m-Xylene	---
o-Xylene	---
1,2 Dichlorobenzene	<5.0
1,3 Dichlorobenzene	<5.0
1,4 Dichlorobenzene	<5.0
1,2,4 Trichlorobenzene	---
TOTAL XYLENE	67.9
DATE OF ANALYSIS	4/23/87

RESULTS ARE IN UG/KG DRY WEIGHT.
<=LESS THAN, NONE DETECTED. ANALYSIS PERFORMED BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY USEPA METHOD 624.

THE LIABILITY OF GARDEN STATE LABORATORIES, INC. FOR SERVICES RENDERED SHALL IN NO EVENT EXCEED THE AMOUNT OF THE INVOICE.
Certified by U.S. Public Health Service, N.J. Dept. of Health and N.J.D.E.P. – Lab #07044

GARDEN STATE LABORATORIES, INC.

Bacteriological and Chemical Testing
399 Stuyvesant Avenue
Irvington, N.J. 07111

Telephone
201-373-8007

MATHEW KLEIN, M.S., Director
HARVEY KLEIN, M.S., Lab. Supervisor

REPORT OF VOLATILE ORGANIC ANALYSIS

TO: ENVIRONICS
46 JACKSON DRIVE

CRANFORD NJ 07016

ATT:

REPORT # 70415024
CLIENT # ENV01
DATE SUBMITTED: 4/15/87

SAMPLE TYPE: SOIL
SAMPLE ID: B-2
SAMPLE LOCATION: PROJECT NO. E-1117 NAME: METZ METALLURGICAL CORP.

DATE SAMPLED: 4/14/87 TIME SAMPLED: 11:50

COMPOUND	RESULT	COMPOUND	RESULT
Chloromethane	<5.0	1,1,2 Trichloroethane	<5.0
Bromomethane	<5.0	cis-1,3 Dichloropropylene	<5.0
Dichlorodifluoromethane	<5.0	Benzene	<5.0
Vinyl Chloride	<5.0	2-Chloroethylvinyl ether	<5.0
Chloroethane	<5.0	Bromoform	<5.0
Methylene Chloride	<5.0	1,1,2,2 Tetrachloroethane	<5.0
Trichlorofluoromethane	<5.0	Tetrachloroethylene	<5.0
1,1 Dichloroethylene	<5.0	Toluene	<5.0
1,1 Dichloroethane	<5.0	Chlorobenzene	<5.0
trans-1,2 Dichloroethlylene	<5.0	Ethylbenzene	<5.0
Chloroform	<5.0	p-Hylene	<5.0
1,2 Dichloroethane	<5.0	m-Hylene	<5.0
1,1,1 Trichloroethane	<5.0	o-Hylene	<5.0
Carbon Tetrachloride	<5.0	1,2 Dichlorobenzene	<5.0
Bromodichloromethane	<5.0	1,3 Dichlorobenzene	<5.0
1,2 Dichloropropane	<5.0	1,4 Dichlorobenzene	<5.0
trans-1,3 Dichloropropene	<5.0	1,2,4 Trichlorobenzene	---
Trichloroethlyene	<5.0	DATE OF ANALYSIS	4/23/87
Dibromochloromethane	<5.0		
Methyl tert-Butyl Ether	<5.0		
Isopropyl Ether	<5.0		

RESULTS ARE IN UG/KG DRY WEIGHT.
<=LESS THAN, NONE DETECTED. ANALYSIS PERFORMED BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY USEPA METHOD 624.

THE LIABILITY OF GARDEN STATE LABORATORIES, INC. FOR SERVICES RENDERED SHALL IN NO EVENT EXCEED THE AMOUNT OF THE INVOICE.

Certified by U.S. Public Health Service, N.J. Dept. of Health and N.J.D.E.P. – Lab #07044

GARDEN STATE LABORATORIES, INC.

Bacteriological and Chemical Testing
399 Stuyvesant Avenue
Irvington, N.J. 07111

Telephone
201-373-8007

MATHEW KLEIN, M.S., Director
HARVEY KLEIN, M.S., Lab. Supervisor

REPORT OF VOLATILE ORGANIC ANALYSIS

TO: ENVIRONICS
46 JACKSON DRIVE

CRANFORD NJ 07016

ATT:

REPORT # 70415025
CLIENT # ENV01
DATE SUBMITTED: 4/15/87

SAMPLE TYPE: SOIL
SAMPLE ID: B-3
SAMPLE LOCATION: PROJECT NO. E-1117 NAME: METZ METALLURGICAL CORP.

DATE SAMPLED: 4/14/87 TIME SAMPLED: 11:10

COMPOUND	RESULT	COMPOUND	RESULT
Chloromethane	<5.0	1,1,2 Trichloroethane	<5.0
Bromomethane	<5.0	cis-1,3 Dichloropropylene	<5.0
Dichlorodifluoromethane	<5.0	Benzene	<5.0
Vinyl Chloride	<5.0	2-Chloroethylvinyl ether	<5.0
Chloroethane	<5.0	Bromoform	<5.0
Methylene Chloride	<5.0	1,1,2,2 Tetrachloroethane	<5.0
Trichlorofluoromethene	<5.0	Tetrachloroethylene	<5.0
1,1 Dichloroethylene	<5.0	Toluene	<5.0
1,1 Dichloroethane	<5.0	Chlorobenzene	<5.0
trans-1,2 Dichloroethylene	<5.0	Ethylbenzene	<5.0
Chloroform	<5.0	p-Xylene	<5.0
1,2 Dichloroethane	<5.0	m-Xylene	<5.0
1,1,1 Trichloroethane	<5.0	o-Xylene	<5.0
Carbon Tetrachloride	<5.0	1,2 Dichlorobenzene	<5.0
Bromodichloromethane	<5.0	1,3 Dichlorobenzene	<5.0
1,2 Dichloropropene	<5.0	1,4 Dichlorobenzene	<5.0
trans-1,3 Dichloropropene	<5.0	1,2,4 Trichlorobenzene	---
Trichloroethlyene	<5.0	DATE OF ANALYSIS	4/23/87
Dibromochloromethane	<5.0		
Methyl tert-Butyl Ether	<5.0		
Isopropyl Ether	<5.0		

RESULTS ARE IN UG/KG DRY WEIGHT.
<=LESS THAN, NONE DETECTED. ANALYSIS PERFORMED BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY USEPA METHOD 624.

THE LIABILITY OF GARDEN STATE LABORATORIES, INC. FOR SERVICES RENDERED SHALL IN NO EVENT EXCEED THE AMOUNT OF THE INVOICE.

Certified by U.S. Public Health Service, N.J. Dept. of Health and N.J.D.E.P. – Lab #07044

GARDEN STATE LABORATORIES, INC.

Bacteriological and Chemical Testing
399 Stuyvesant Avenue
Irvington, N.J. 07111

Telephone
201-373-8007

MATHEW KLEIN, M.S., Director
HARVEY KLEIN, M.S., Lab Supervisor

ENVIRONICS, INC.
46 JACKSON DRIVE
CRANFORD, NJ 07016

SAMPLES SUBMITTED: FRI. APRIL 3, 1987

SOIL SAMPLES RE: METZ METALLURGICAL CORP. E-1117 RESULTS ARE IN MG/KG DRY WEIGHT BASIS.

	11:50 C-1 0-0.5'	13.40 C-2 0-0.5'	14.20 C-3 0-0.5'	4:45 C-4 0-0.5'
ARSENIC	2.30	2.15	2.70	2.05
BERYLLIUM	<0.8	<1.0	<0.8	<0.7
CADMIUM	0.47	0.51	0.44	0.98
CHROMIUM	23.0	27.7	22.6	18.7
COPPER	39.8	32.4	85.1	57.0
LEAD	43.2	43.0	49.8	44.7
MERCURY	0.069	<0.07	<0.06	0.072
SILVER	5.02	6.13	5.61	4.86
SELENIUM	0.117	<0.14	<0.12	<0.11
NICKEL	37.4	44.8	35.4	32.6
ANTIMONY	<1.10	<1.4	<1.2	<1.10
THALLIUM	5.68	6.94	6.08	5.85
ZINC	91.8	101.	88.6	75.5
POLYCHLORINATED BIPHENYLS	<0.01	<0.01	<0.01	<0.01
PETROLEUM HYDROCARBON	23.6	28.3	<20.0	161.

THE LIABILITY OF GARDEN STATE LABORATORIES, INC. FOR SERVICES RENDERED SHALL IN NO EVENT EXCEED THE AMOUNT OF THE INVOICE.
Certified by U.S. Public Health Service, N.J. Dept. of Health and N.J.D.E.P.—Lab #07044

REFERENCE 12

Let's protect our earth

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
CN 028
Trenton, N.J. 08625-0028
(609) 633-7141
Fax # (609) 633-1454

APR 26 1991

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
Mr. Paul B. Dahlgren
CH2M Hill
99 Cherry Hill Road
Parsippany, New Jersey 07054-1102

Dear Mr. Dahlgren:

RE: Industrial Establishment: Metz Metallurgical Corporation
Location: 3900 South Clinton Avenue
South Plainfield Borough, Middlesex County
Block: 467-01 Lots: 29.01, 30
Transaction: Sale of Property and Business Assets, Transfer of Stock
ECPA Case # 86108
Cleanup Plan Dated: 31 July 1990
Response to Draft Cleanup Plan Approval/Revised Cleanup Plan
Dated: 27 March 1991

Pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection (NJDEP) by the Environmental Cleanup Responsibility Act (ECRA, N.J.S.A. 13:1K-6 et seq.) and duly delegated to the Assistant Director of the Industrial Site Evaluation Element, the referenced Cleanup Plan submitted in behalf of Metz Metallurgical Corporation (Metz) is hereby approved as conditioned herein:

I. CLEANUP LEVELS.

1. Soils. The cleanup concentration for soils at this industrial establishment shall be as follows:

Contaminant	Onsite[a]	Offsite
Cadmium (Cd)	110 ppm	3 ppm
Copper (Cu)	1,000 ppm	170 ppm
Silver (Ag)	200 ppm	5 ppm
Nickel	100 ppm	100 ppm
Chromium	100 ppm	100 ppm
Petroleum Hydrocarbons (PHC)	15,000 ppm *	n/a
Base Neutral Compounds (BN)	**	n/a

[a] Onsite cleanup concentrations were established for the contaminants at the subject site based on representation of continuing industrial use of this site. Please be advised that any change in the future use of the site will likely result in more conservative cleanup levels being established at that time. If industrial operations cease, the site must either be remediated to cleanup levels appropriate for the next use or formal restrictions of use will be imposed to ensure adequate protection of public health and the environment.

* The cleanup concentration for PHC applies to PHC contamination that is demonstrated to be free of Volatile Organics (specifically Benzene) and Ca(PAH) contamination in excess of 1 ppm and 10 ppm, respectively.

** For petroleum based contamination. If carcinogenic polycyclic aromatic hydrocarbons (Ca(PAHs)) are present in excess of 10 ppm, the Soil Cleanup Level for BN and Ca(PAH) shall be 10 ppm. If Ca(PAH) are not present or are present at concentrations below 10 ppm, BN cleanup shall be to 100 ppm. The CaPAHs are as follows:

benzo(a)anthracene	dibenz(a,h)anthracene
benzo(b)fluoranthene	dibenzo(a,e)pyrene
benzo(j)fluoranthene	dibenzo(a,h)pyrene
benzo(k)fluoranthene	dibenzo(a,i)pyrene
benzo(a)pyrene	dibenzo(a,l)pyrene
chrysene	indeno(1,2,3-cd)pyrene

II. AREAS FOR WHICH NO FURTHER ACTION IS REQUIRED.

1. Area B. Historical Drum Storage Area. PHC contamination below the approved industrial cleanup concentration exists to a depth of 2.5 feet. No further action is required.

2. Area C. Historical Drum and Equipment Storage Area. Ag concentrations below the approved industrial cleanup levels were left behind prior to paving. The remaining levels reported are insignificant. No further action is required.

3. Area D. Equipment Storage Area. Low level Ag, Cd, Cu and PHC contamination is present below the approved industrial cleanup levels. No further action is required.

4. Area F. Former Underground Storage Tank (UST). This UST was reportedly removed in 1981. Soil sampling indicates that this area is not of concern. No further action is required.

5. Area G. Soils in the Vicinity of MW-105. Soil sampling was required in this area to confirm that VOs identified in ground water samples from MW-105 were not emanating from an onsite source. The data verifies that no VOs are present in the soils. No further action is required.

6. Waste Piles. No further action is required with regard to the retention basin soil stockpile. With regard to the Area C stockpiles, stockpiled soil may be reused onsite provided that proper controls are employed that will prevent offsite transport of residual contamination. Due to contaminant concentrations in excess of the approved offsite cleanup levels, should Metz wish to remove soils from the site it shall do so under the appropriate waste manifests and/or bills of lading. Metz shall provide copies of all waste manifests, if offsite disposal is undertaken.

III. SOIL CLEANUP APPROVED WITH CONDITIONS.

1. Area A. The proposal to excavate Ag contaminated soils and to properly dispose of said soils offsite is generally acceptable. Metz shall collect post-ex samples at a frequency of 1 sample per 900 square feet of excavated surface area. This requirement may be met by incorporating existing "clean" samples with those collected as post-ex. Analysis shall be for area target

parameters only.

2. Area AWT Stockpile. Soil stockpile sampling data indicate BN compounds, specifically CaPAHs, to be of concern. Metz shall properly dispose of this soil stockpile offsite. Copies of all waste manifests shall be submitted to BEECRA.

   Metz may re-sample the stockpile to segregate out that portion of the soil that is contaminated in excess of the approved clean up concentrations. Refer to the NJDEP Remedial Investigation Guide for appropriate waste soil sampling frequency. Soil exhibiting contaminants below the approved cleanup levels may be re-used onsite, provided that proper controls are employed that will prevent offsite transport of residual contamination; soil exhibiting contaminants in excess of the approved cleanup levels shall be properly disposed offsite and the waste manifests submitted to BEECRA.

3. Area B. Former NJPDES Outfall and Stream. The proposed excavation and offsite disposal of Ag and Cu contaminated sediments and soils in this area is generally acceptable. Post-ex samples shall be collected every 30 linear feet, alternating between the bed of the stream and the bank of the stream.

   Metz shall contact the Division of Coastal Resources to obtain applications for any required permits. Contact:

   Bureau of Inland Regulation, Raritan Region
   CN 401
   501 East State Street
   Trenton, N.J. 08609
   (609) 633-6449

   In addition, Metz shall contact the Freehold Soil Conservation District, to obtain any required Soil Erosion and Sediment Control Plan certifications:

   Freehold Soil Conservation District
   211 Freehold Road
   Manalapan, New Jersey 07726
   (201) 462-1079

4. Perimeter Samples. The proposal to excavate Ag contaminated soils for re-use onsite is generally acceptable provided that proper controls are employed that will prevent offsite transport of residual contamination; prior to implementing the proposal, Metz shall complete the delineation (30 foot maximum) of offsite contamination to current NJDEP Action Levels around all contaminated perimeter borings. It is recommended that Metz employ a field survey X-Ray Fluorescence (XRF) instrument (with 10% of the samples laboratory confirmed) as an aid in the delineation effort. Please refer to the attached guidance document Field Screening Using a Field Survey XRF Instrument, to ensure that acceptable QA/QC is maintained.

   The levels found in on-site perimeter samples will not require remediation; however, soil erosion control measures shall be employed to minimize wind/water transport of soil residuals.

   Metz shall remediate offsite perimeter contamination to the "offsite cleanup concentration" as stated in Section I.

III. GROUND WATER.

1. Offsite Contamination. The investigation of groundwater contamination has concluded to the Department's satisfaction. The data indicate an offsite, upgradient source for the VO groundwater contamination identified in Metz' monitoring wells. No further action is required at this time.

2. Monitoring Wells. Metz' proposal to leave open the onsite monitoring wells for the purposes of ground water monitoring as a safety precaution is acceptable. If, however, the wells will not be used they shall be sealed by a New Jersey licensed Well Driller, certified to seal wells, in accordance with NJDEP Well Sealing Specifications. To obtain said specifications, contact:

Bureau of Water Allocation
CN 029
401 East State Street
Trenton, N.J. 08625-0029
(609) 292-2957

3. Area D. Retention Basin. Metz shall obtain the required NJPDES Permit for this basin, which has replaced the previous NJPDES permitted outfall.

VI. OTHER MEDIA.

Asbestos Containing Material (ACM). Metz reports the existence of areas that "...contain some chrysotile asbestos", according to an environmental audit performed by BCM.

1. Potential ACM areas shall be identified by a systematic asbestos inspection/survey. It is recommended that the inspection be conducted by a Certified Industrial Hygienist or Certified Asbestos Safety Technician.

2. Metz shall submit a map showing the location of any asbestos containing insulation. Areas of friable insulation shall be highlighted. Estimated quantities of asbestos insulation shall be noted on the map. Metz shall have the suspected ACM sampled and analyzed for asbestos in accordance with USEPA method 600/4-82-020.

3. Metz shall remediate all friable (containing by weight more than 1% asbestos, which when dry, may be crumbled, pulverized or reduced to a powder by hand pressure) and/or damaged ACM. Metz shall comply with all applicable federal, state and local regulations, codes and ordinances including but not limited to the following:

- USEPA Asbestos Abatement Project Rule 40 CFR 762;
- USEPA Regulation for Asbestos 40 CFR 61, Subpart A;
- USEPA National Emission Standard for Asbestos 40 CFR 61 Subpart M;
- N.J. Asbestos Control and Licensing Act, N.J.S.A. 34:5A-32 et seq.;
- NJDOL and NJDOH Regulations on Asbestos Licenses and Permit Regulations, N.J.A.C. 8:60 and N.J.A.C. 12:120;
- NJDEP Disposal Regulations N.J.A.C. 7:26.

4. All asbestos remediation activities shall be conducted in compliance with U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) regulations 29 CFR 1910 and 29 CFR 1926.

5. Metz shall submit to BEECRA copies of all permits and disposal manifests and, upon completion of remediation, provide specific details concerning achievement of final clearance.

   a. The final clearance standard for visual inspection shall be the absence of ACM. The final visual inspection shall be performed by a Certified Industrial Hygienist (CIH), Certified Asbestos Safety Technician (AST) or similarly qualified person.

   b. The final clearance standard for air monitoring results shall be 0.01 fibers per cubic centimeter, which shall be demonstrated by aggressive air sampling for airborne fibers, utilizing a manometer or similar sampling device.

V. GENERAL CONDITIONS.

1. Metz shall comply with all federal, state, and local laws, regulations, and ordinances in implementing the approved Cleanup Plan.

2. Metz shall obtain all federal, state, and local permits prior to implementation of the approved Cleanup Plan. Should any condition or limitation of said permits be more stringent than those in the approved Cleanup Plan, then said permit requirements shall supersede the terms of this approval.

3. Upon the written request of NJDEP, Metz shall submit for NJDEP review and approval any additional sampling plans deemed necessary by NJDEP during the implementation of a Cleanup Plan to fully delineate the nature and extent of environmental contamination on or from the Metz facility. Metz shall implement and complete any such additional Sampling Plans, and submit the results thereof, in accordance with the timeframes set forth in the approved additional Sampling Plan. Furthermore, Metz shall prepare and submit to NJDEP for approval any revisions to the Cleanup Plan necessary to remediate any additional environmental contamination on or from Metz as identified during the cleanup plan implementation, by any additional sampling, or from any other source. Metz shall revise and submit the required information within a reasonable time not to exceed 30 calendar days from receipt of written notification from NJDEP.

4. The ECRA Requirement for remediation of all environmental contamination on or from the Metz facility and the terms and conditions of the approved Cleanup Plan shall be binding upon Metz, and its officers, management officials, successors in interest, assigns, tenants, and any trustee in bankruptcy or receiver appointed pursuant to a proceeding in law or equity.

5. Metz shall prepare and submit to NJDEP monthly written progress reports detailing the implementation of the Cleanup Plan.

6. Metz shall prepare and submit a final written report detailing the actual cleanup actions performed and final cleanup costs including overhead, compared to the cleanup actions, schedule and costs approved in the Cleanup Plan. The report should also include the dates of cleanup activities, additional sampling results, and other pertinent information.

7. Metz shall amend the amount of posted financial assurance specified in paragraph 11. A of the Metz Metallurgical Corporation Administrative Consent Order to equal the amount of $338,200, the estimated cost of implementation of the Cleanup Plan, or shall provide alternative financial assurance in accordance with the regulatory requirements of N.J.A.C. 7:26B-6, in the amount specified above, within fourteen (14) days of receipt of this Cleanup Plan approval. Furthermore, Metz shall maintain the required financial assurance until NJDEP issues a written notification that the Cleanup Plan had been fully implemented to NJDEP's satisfaction.

8. Metz shall provide, within fourteen (14) calendar days of receipt of this Cleanup Plan approval, oversight fees in the amount of $7,000, based on the cost of the cleanup, in accordance with the regulatory requirements of N.J.A.C. 7:26B-1.10.

9. Metz shall initiate the Cleanup Plan as conditioned in this letter within two (2) weeks of receipt of this letter, and in accordance with N.J.A.C. 7:26B-5.5(c), begin implementation of this Cleanup Plan according to the proposed time schedule. If any delay or anticipated delay had been or will be caused by events beyond the control of Metz, Metz shall notify NJDEP in writing within ten (10) days of the delay, describing the delay and precise cause or causes and requesting an extension. Increases in the costs or expenses incurred in fulfilling the requirements contained in this letter shall not be a basis for an extension and such extension requests will not be granted. If Metz fails to implement the Cleanup Plan in accordance with the proposed schedule, the NJDEP reserves the right to implement full enforcement measures and assess penalties pursuant to N.J.A.C. 7:26B-9.

10. Metz shall notify the BEECRA Cleanup Oversight Section at least five (5) days prior to the initiation of remedial actions at the site so that the case manager may be present. Contact:

Ms. Tessie Fields, Section Chief
BEECRA Cleanup Oversight Section
401 East State Street
Trenton, N.J. 08625
(609) 633-7141

NJDEP's approval, as conditioned above, is limited to the above referenced Cleanup Plan only. This Cleanup Plan approval shall not limit, restrict, or prohibit NJDEP from directing on-site or off-site cleanup, if deemed necessary by NJDEP, under any other statute, rule, or regulation. Metz is hereby required to fully implement the referenced Cleanup Plan, as conditioned above, in accordance with the time schedule as set forth therein.

By issuing this Cleanup Plan approval, NJDEP continues to reserve all rights to pursue any penalties allowable under the law for violations of the ECRA statute or regulations associated with this transaction.

Sincerely,

Kenneth T. Hart, Acting Assistant Director
Industrial Site Evaluation Element

attachment

c: Tina Layre, BEAC
Fred Cornell, BEERA
Bob Lux, BGWDC
Freehold Soil Conservation District
Andrew Simpf, South Plainfield Health Dept.

REFERENCE 13

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
CN 028
Trenton, N.J. 08625-0028
(609) 633-7141
Fax # (609) 633-1454

AUG 06 1991

Paul Dahlgren
CH2M Hill
99 Cherry Hill Road
Parsippany, NJ 07054-1102

Dear Mr. Dahlgren:

RE: Metz Metallurgical Corp.
S. Plainfield Boro., Middlesex County
ECRA Case #86108

The Industrial Site Evaluation Element ("ISEE") has reviewed your June 14, 1991 submission concerning the "No Further Action" request for remedial activities in Area A. As a result of the submission, the requirements as outlined in item III(1) of the Cleanup Plan Approved April 26, 1991 for Metz Metallurgical Corp. are now satisfied. The no further action proposal for Area A is acceptable to the ISEE provided the reuse of this facility remains industrial.

If you have any questions regarding this letter, please contact the Case Manager, John Kosher, at (609) 633-7141.

Sincerely,

Tessie W. Fields, Acting Section Chief
Bureau of Environmental Evaluation and
Cleanup Responsibility Assessment

c. Robert L. Lux, BGWDC
Chris Lacy, BERRA
Peter Metz, Metz Metallurgical Corp.

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REFERENCE 14

FINAL REPORT

For

METZ METALLURGICAL CORPORATION

3900 South Clinton Avenue
South Plainfield, New Jersey

ECRA CASE NO. 86108

Prepared By:

CH2M HILL

Parsippany, New Jersey
May 1992

Section 1
Introduction

Site Description

The Metz Metallurgical Corporation (Metz) is located on South Clinton Avenue, in South Plainfield, Middlesex County, New Jersey (Figure 1-1). The site is in an industrial area, approximately one-half mile north of Interstate Highway 287. The 12-acre site contains two buildings, identified as Buildings A and B, which total more than 140,000 square feet (Figure 1-2). Remaining land is used for parking, equipment storage, or is vacant.

Since its founding in 1921, in Newark, New Jersey, Metz has been a producer of precious metal products. The primary products include silver alloys and compounds for the microelectronics industry. Other metals are produced in smaller quantities, including gold, platinum, and palladium. All Metz operations were moved from Newark to the present South Plainfield site in 1965. Several property acquisitions and construction programs have occurred since then. Figure 1-2 shows the site as it was in February, 1986, when Metz came under the jurisdiction of New Jersey's Environmental Cleanup and Responsibility Act (ECRA). Since that time, additional property, including a building identified as Building C, has been leased. The additional property is located to the north of the original site. Due to the former SIC code of the property, this transaction did not come under the jurisdiction of ECRA.

Building A houses all manufacturing operations. Because the company is in the precious metal industry, an elaborate security system has been established, including double chain-link fencing, security guards, and electronic surveillance systems. All persons, including employees, contractors, and visitors, must pass through metal detection equipment when exiting the security zone; if necessary, strip searches are conducted.

All operations involving hazardous materials are conducted within the security zone. Silver is the hazardous material stored and used in the greatest quantity, either as silver metal or as silver oxide, silver chloride, or silver nitrate.

Storm water runoff and non-contact cooling waters are discharged at a New Jersey Pollutant Discharge Elimination System (NJPDES) permitted outfall at the west side of the security zone. The discharge point was upgraded in 1990 to include a water retention basin. The discharge is continuously monitored for water quality and will shut down automatically or manually with an alarm, based on water quality. Floor drains in the plant are routed through safety catchments and process sumps to the metal recovery system. The recovery system effluent discharges to the sanitary sewer system.

2

Greater detail on the site description, history, and operation were included in the Site Evaluation Submission (SES), submitted to the New Jersey Department of Environmental Protection and Energy (NJDEPE) on March 4, 1986 (1).

History of ECRA Investigation

The history of the ECRA investigation conducted at Metz is summarized in Table 1-1 and is detailed below. Referenced correspondence is included in Appendix A.

The Initial Notice for Metz, including the General Information Submission (GIS), submitted February 10, 1986 (2), and the SES, were declared complete by the NJDEPE on March 7, 1986 (3). The business and real estate were sold under the authority of an Administrative Consent Order (ACO), which was executed on July 23, 1986. With the exception of expansion and continued upgrading of processes and environmental controls, operations continue unchanged under the new ownership.

The Metz site was inspected on June 24 and 25, 1986 and again on May 29, 1991. Comments from the first inspection report and review of the Sample Plan included in the SES were incorporated into a Revised Sample Plan (RSP) (4), which addressed environmental concerns in sections of the site designated A through G (Figure 1-3). The plan was submitted to the NJDEPE on December 10, 1986, and approved with conditions on February 18, 1987 (5).

Field operations for the soil sampling program were conducted during April of 1987, and a report entitled *Analytic Results for Soil Sampling Program* (ARSSP) (6) was submitted to the NJDEPE on July 31, 1987. The analytical data were declared acceptable by the NJDEPE on January 20, 1988 (7).

A groundwater investigation was initiated at the Metz site in November 1985, before the ECRA Initial Notice was submitted. The objective of the investigation was to evaluate the integrity of below-grade structures in the plant. If these structures had leaked, above-normal concentrations of silver in groundwater would be expected.

The groundwater analytical data submitted in the SES, and additional data included in an Interim Report (submitted in July 1986) (8), showed no evidence of groundwater contamination by precious metals by Metz. However, the NJDEPE did not accept the analytical data because of sampling and analytical procedures, and the NJDEPE required resampling in their letter of January 20, 1988 (7). The wells were resampled in February 1988 and the data were submitted in the Groundwater Sampling Results (9) on October 21, 1988. These data, accepted by the NJDEPE on June 20, 1989 (10), confirm the earlier finding that no groundwater contamination by precious metals has occurred.

3

Table 1-1 Summary of Milestone Events Metz Metallurgical Corporation	
Date	**Event**
February 10, 1986	GIS submitted
March 4, 1986	SES with Sample Plan submitted
March 7, 1986	NJDEPE declared GIS and SES complete
June 24-25, 1986	NJDEPE inspection of Metz site
July 23, 1986	ACO executed for sale of business and real estate
July 1986	Hydrogeologic Investigation Interim Report submitted
October 2, 1986	NJDEPE disapproves 3/4/86 Sampling Plan and issues comments from the inspection report
December 10, 1986	Revised Sample Plan submitted
February 18, 1987	NJDEPE grants conditional approval of Revised Sample Plan of 12/10/86
April 1987	Soil Sampling performed
July 31, 1987	Analytic Results for Soil Sampling Program (ARSSP) submitted
August 14, 1987	Supplemental Sample Plan submitted
January 20, 1988	NJDEPE conditionally approves of ARSSP
February 1988	Groundwater was resampled
April 19, 1988	Meeting at NJDEPE office for proposed remedial action
October 14, 1988	Remedial Action Plan (RAP) submitted
October 21, 1988	Groundwater Sampling Results from resampling submitted
June 20, 1989	NJDEPE approves Groundwater Sampling Results, rejects 10/14/88 RAP, and requires submission of amended sampling plan
July 21, 1989	Metz responds to 6/20/89 disapproval
August 18, 1989	Well Record Search submitted
August 21, 1989	Amended Sample Plan (ASP) submitted
February 20, 1990	Onsite meeting with NJDEPE
November 1989 and March-April 1990	Additional soil sampling performed
March 8, 1990	NJDEPE approves 8/21/89 Sampling Plan
July 31, 1990	Report of Analytic Results (RAR) from additional soil sampling and Cleanup Plan submitted
October 15, 1990	NJDEPE rejects 7/31/90 Cleanup Plan

4

Table 1-1 Summary of Milestone Events Metz Metallurgical Corporation	
Date	**Event**
October 31, 1990	Metz responds to 10/15/90 rejection
November-December, 1990	Area E—Phase I remediation was conducted
February 14, 1991	Meeting at NJDEPE office; NJDEPE presents new soil cleanup levels
February 1991	Area A remediation was conducted
March 6, 1991	Waste Classification Request for 400 cubic yards of stockpiled soil submitted
March 7, 1991	NJDEPE issues Draft Conditional Cleanup Plan Approval (DCCPA)
March 27, 1991	Revised Cleanup Plan submitted
April 12, 1991	Metz receives ID #27 classification for 400 cubic yards of stockpiled soil
April 26, 1991	NJDEPE approves 3/27/91 Revised Cleanup Plan and reassigns case to Cleanup Oversight Section
May 21, 1991	Metz case reassigned to Cleanup Oversight Section of NJDEPE
May 22, 1991	AWT stockpile was segregated and resampled
June-July, 1991	Area E—Phase II remediation was conducted
June 5, 1991	Asbestos survey was conducted by Emilcott Associates, Inc.
June 14, 1991	Area A and Area E—Phase I soil disposal was completed
July 8, 1991	52 drums from AWT stockpile disposal was completed
August 6, 1991	NJDEPE approves no-further-action proposal for Area A
September 9, 1991	NJDEPE approves AWT stockpile segregation
September 13, 1991	CH2M HILL clarifies NJDEPE misunderstanding regarding the original AWT location
October 28, 1991	Waste Classification Request for 600 cubic yards of stockpiled soil submitted
November 14, 1991	Metz receives ID #27 classification for 600 cubic yards of stockpiled soil
January 20, 1992	Area E—Phase II, South Perimeter and North Perimeter soil disposal was completed
February 11, 1992	NJDEPE approved no-further-action proposals for Area E, South Perimeter and North Perimeter

5

During the groundwater investigation, volatile organic compounds (VOCs) were detected in the groundwater. This investigation, described in the July 1986 Interim Report (8), indicated that the source of the VOCs was upgradient (north) of the Metz site. As an approval condition of the RSP, the NJDEPE required soil sampling at the north side of the plant (Area G, Figure 1-3). The requested samples were collected, and results were included in the ARSSP. No VOCs were detected in any of the samples. These data were accepted by the NJDEPE in the January 20, 1988, correspondence (7) and closure of this area was approved by the NJDEPE in the April 26, 1991 correspondence (11).

A meeting was held in the office of the Bureau of Environmental Evaluation and Cleanup Responsibility Assessment (BEECRA) on April 19, 1988. The meeting was attended by Messrs. Nalbone, Lux, and Gillespie, who represented the NJDEPE; Mr. Rabinowitz, of McCarter & English; and Mr. Dahlgren, of Environics, Inc., who represented Metz. The philosophy of a proposed remedial action for the site was discussed. Based on the verbal agreement with the conceptual plan by NJDEPE representatives at the meeting, CH2M HILL and Metz subsequently prepared and submitted a Remedial Action Plan (RAP), dated October 14, 1988 (12).

In June 1989, the NJDEPE determined the RAP "...to be inadequate and incomplete..." and required the submission of an amended sample plan (10). For clarification of possible misunderstandings, CH2M HILL, on behalf of Metz, submitted a response to the major NJDEPE concerns on July 21, 1989 (13). In addition, an Amended Sample Plan (ASP) (14) was submitted on August 21, 1989. The ASP was approved with conditions by the NJDEPE on March 8, 1990 (15).

Field operations for the approved soil sampling program were conducted during November 1989, March 1990, and April 1990. A description of the field operations and the analytical results were submitted in the Report of Analytic Results (RAR) on July 31, 1990 (16). In addition, the Cleanup Plan (17) was prepared and submitted in compliance with the requirement included in the NJDEPE letter of March 8, 1990 (15).

In the letter dated October 15, 1990 (18), the NJDEPE rejected the proposed cleanup plan. CH2M HILL, on behalf of Metz, responded to the NJDEPE comments on October 31, 1990 (19). A meeting was held in the office of BEECRA to discuss the cleanup plan on February 14, 1991. The meeting was attended by Messrs. McCann, Lux, and Cornell, who represented the NJDEPE; Mr. Dahlgren and Ms. DeBiasse, of CH2M HILL, who represented Metz; and Messrs. Metz and Eves of Metz. During the meeting, the NJDEPE presented new cleanup concentration requirements for the soils at Metz.

On March 7, 1991, the NJDEPE issued a Draft Conditional Cleanup Plan Approval (DCCPA) (20), in which the major points discussed at the meeting were reiterated. Based on the new cleanup levels and the other items discussed in the February 14, 1991, meeting with the NJDEPE and the DCCPA, a revision to the Cleanup Plan was submitted to the NJDEPE on March 27, 1991 (21). The NJDEPE issued a Revised Conditional Cleanup Plan Approval (RCCPA) on April 26, 1991 (11). As a result of the Cleanup Plan approval for Metz, the NJDEPE reassigned the case to the Cleanup Oversight Section and requested that monthly progress reports for the cleanup activities begin on June 15, 1991.

6

At the time of the first monthly progress report, approximately 65 percent of the cleanup work had already been completed, reported to, and closed by the NJDEPE. The remainder of the cleanup work was reported each month as the work was completed. A total of nine monthly reports were submitted during the period of June 15, 1991, through February 15, 1992, that documented the implementation of the cleanup plan. This Final Report summarizes the information submitted in the monthly reports and includes other additional information requested by the NJDEPE in a letter of February 11, 1992 (22).

7

Section 2
Summary of Remediation Activities

This section presents the dates of remediation activities and NJDEPE closure for the designated areas of environmental interest shown on Figure 1-3.

Activities Completed Prior to Cleanup Plan Approval

Remediation activities in the following former areas of environmental interest were completed prior to receiving Cleanup Plan approval by the NJDEPE on April 26, 1991.

In Item II of the NJDEPE Cleanup Plan Approval letter (11), the NJDEPE declared that no further action is required for the following areas:

- Area B - Historical Drum Storage Area
- Area C - Historical Drum and Equipment Storage Area
- Area D - Equipment Storage Area
- Area F - Former Underground Storage Tank
- Area G - Soils in the Vicinity of MW-105
- Waste Piles - Retention Basin Stockpile and Area C stockpiles

Activities Completed After Cleanup Plan Approval

In accordance with the cleanup plan approval, remediation activities were required in the following five designated areas of environmental interest:

- Area A
- AWT Stockpile
- Area E
- South Perimeter
- North Perimeter

Remediation activities conducted in these five areas were reported in monthly reports submitted to the NJDEPE. After reviewing the reports, the NJDEPE approved the no-further-action proposals for each of the five areas. Table 2-1 presents a summary of the milestone events for cleanup activities including the dates for remediation activities, monthly report submission, and closure of the area by the NJDEPE.

8

Table 2-1 Summary of Milestone Events for Cleanup Activities			
Area	Date of Remediation Activities	Date of Monthly Report Submission	Date of NJDEPE Closure of the Area
Area A	Feb. 1991	June 15, 1991	Aug. 6, 1991
AWT Stockpile	May 1991	July 15, 1991	Sept. 9, 1991
Area E - Phase I	Dec. 1991	Aug. 15, 1991	Feb. 11, 1992
Area E - Phase II	July 1991	Aug. 15, 1991	Feb. 11, 1992
South Perimeter	May to June, 1991	Aug. 15, 1991	Feb. 11, 1992
North Perimeter	Aug. 1991	Oct. 15, 1991	Feb. 11, 1992

9

Section 3
Waste Classification and Disposal Documentation

A summary of the volume, location, and disposal date of waste materials generated during remedial activities is presented in Table 3-1. The waste disposal summary and disposal documentation for these materials are included in Appendix B.

Table 3-1
Wastes Generated During Remedial Activities
Metz Metallurgical Corporation

Location Generated	Approximate Volume	Disposal Date
Area A and Area E—Phase I	400 cu. yds.	June 14, 1991
AWT Stockpile	52 drums	June 28, 1991
Area E—Phase II, North Perimeter and South Perimeter	840 cu. yds.	January 20, 1992

The 400 and 840 cubic yards of soil generated predominantly during the remediation of Area E and the north perimeter was transported to the Pennsauken Solid Waste Management Authority for use as daily cover. Before the soil was disposed of, classification of it as dry, industrial waste (ID #27) from the NJDEPE Division of Hazardous Waste Regulation and Classification was obtained. Waste characterization analysis was performed on the 400 and 840 cubic yards separately and a Waste Classification Request was submitted for each to the NJDEPE. A copy of each classification letter issued by the NJDEPE is included in Appendix B.

10

Section 4

Permits Required for Cleanup Plan Implementation

A Stream Encroachment for Freshwater Wetlands permit was required during remediation of Area E. The permit was issued by the Coastal Resources Division of the NJDEPE to remove silver-contaminated sediments from the onsite swale and offsite stream. A copy of the permit is included in Appendix C.

Section 5
Costs

Table 5-1 presents a summary of the total cost of implementing the cleanup plan.

Table 5-1
Summary of Total Costs For Cleanup
Metz Metallurgical Corporation

Cleanup Activity	Cost
Engineering Consultant Fees	$72,000
Legal Consultant Fees	25,000
Analytical Contractor	14,500
Excavation Contractor	46,500
Drilling Contractor	0
Transportation and Disposal	67,000
TOTAL	$225,000

12

Section 6

Conclusion and Recommendations

This report documents the implementation of the cleanup plan at the Metz site, as required under ECRA. The NJDEPE has issued approval of no-further-action proposals for Area A, the AWT stockpile, Area E, the north perimeter, and the south perimeter. The disposal documentation requested by the NJDEPE is included with this report. No further cleanup activities are required at the Metz site. CH2M HILL proposes issuance of a negative declaration, closure of the ECRA case, and termination of the financial assurance requirements for the Metz ECRA case (86108).

13

References

1. Environics, Inc. Site Evaluation Submission: Metz Metallurgical Corporation; South Plainfield, NJ. March 4, 1986.

2. Environics, Inc. General Information Submission: Metz Metallurgical Corporation; South Plainfield, NJ. February 10, 1986.

3. NJDEPE Correspondence; March 7, 1986.

4. Environics, Inc. Revised Sample Plan for Metz Metallurgical Corporation; South Plainfield, NJ. December 10, 1986.

5. NJDEPE Correspondence; February 18, 1987.

6. Environics, Inc. Analytic Results for Soil Sampling Program at Metz Metallurgical Corporation; South Plainfield, NJ. July 31, 1987.

7. NJDEPE Correspondence; January 20, 1988.

8. Environics, Inc. Hydrogeological Investigation, Interim Report; July 1986.

9. CH2M HILL. Groundwater Sample Results for Metz Metallurgical Corporation; South Plainfield, NJ. October 21, 1988.

10. NJDEPE Correspondence; June 20, 1989.

11. NJDEPE Correspondence; April 26, 1991.

12. CH2M HILL. Remedial Action Plan for Metz Metallurgical Corporation. South Plainfield, NJ. October 14, 1988.

13. CH2M HILL Correspondence; July 21, 1989.

14. CH2M HILL. Amended Sample Plan for Metz Metallurgical Corporation. South Plainfield, NJ. August 21, 1989.

15. NJDEPE Correspondence; March 8, 1990.

16. CH2M HILL. Report of Analytic Results for Metz Metallurgical Corporation. South Plainfield, NJ. July 20, 1990.

17. CH2M HILL. Cleanup Plan for Metz Metallurgical Corporation. South Plainfield, NJ. July 31, 1990.

18. NJDEPE Correspondence; October 15, 1990.

19. CH2M HILL Correspondence; October 30, 1990.

20. NJDEPE Correspondence; March 7, 1991.

21. CH2M HILL Correspondence; March 27, 1991.

22. NJDEPE Correspondence; February 11, 1992.

APPENDIX A
CORRESPONDENCE

Rough estimate

Item	Schedule	Cost
1) **Area A** - Excavate Ag contaminated soil, collect and analyze post excavation samples, and back fill.	3	$5,000
2) **AWT Stockpile** - Excavate BN contaminated soil, collect and analyze post excavation samples.	3	$4,000
3) **Area E, Phase I** - Excavate Ag contaminated sediment, stockpile onsite, collect and analyze post excavation samples.	*	$32,000
4) **Area E, Phase II** - Excavate Ag contaminated sediment, stockpile onsite, collect and analyze post excavation samples.	6	$32,000
5) **Perimeter** - Delineate Ag contamination, excavate offsite soil above cleanup level, collect and analyze post excavation samples.	3	$5,000
6) **Disposal** - Classification, transportation and disposal of soil contaminated above onsite cleanup levels. (Estimate based on 800 yd^3 of non-hazardous waste)	9	$178,000
7) **Basin Permit** - Prepare and submit application for NJPDES-DGW permit	4	$3,000
8) **Asbestos Survey** - Survey Metz plant, and prepare map of asbestos containing material.	4	$5,000
9) **Reporting** - Prepare and submit Quarterly Progress Reports and Final Cleanup Report.	12	$17,800
	Cleanup Total:	$281,800
	Contingency (20 %):	$56,400
	Total:	$338,200

* Completed December 1990

APPENDIX B
DISPOSAL DOCUMENTATION

Waste Disposal Summary

ECRA Case #:	**86108**
Type:	Non-Hazardous (ID #27)
Volume:	400 cubic yards
Landfill:	Pennsauken Solid Waste Management Authority, New Jersey
Contaminant(s):	Silver
Year of Disposal:	1991

ECRA Case #:	**86108**
Type:	New Jersey Hazardous (X725)
Volume:	52 drums 13 cys
Landfill:	Ecoflo, Inc., North Carolina
Contaminant(s):	CaPAHs, BNs, TPH
Year of Disposal:	1991

ECRA Case #:	**86108**
Type:	Non-Hazardous (ID #27)
Volume:	840 cubic yards
Landfill:	Pennsauken Solid Waste Management Authority, New Jersey
Contaminant(s):	Silver
Year of Disposal:	1991

Ann A. Mullen
Chairwoman

Thomas P. Corsorsa
Vice Chairman

Charles Turer
Secretary

Hugh O'Connell
Treasurer

M. Robert Panaccio
Assistant Secretary

Pollution Control Financing Authority of Camden County

Reply to: ☐ 608 Morgan Boulevard, Camden, NJ 08104
Phone (609) 541-1171/Fax (609) 541-1333

☒ Pennsauken Sanitary Landfill Division
9600 River Road, Pennsauken, NJ 08110
Phone (609) 663-1142/Fax (609) 663-7701

John R. Purves, Esq.
Executive Director

John E. Jacobs
Deputy Director, Landfill Operations

John W. Landres
Deputy Director, Resource Recovery and Authority Operations

Joseph R. Wojcik
Clerk to the Authority

Frances C. Verna, C.P.A.
Controller

APRIL 30, 1992

MR. C. SCOTT EVES
DUGUSSA CORPORATION
3900 SOUTH CLINTON AVENUE
SOUTH PLAINFIELD, N.J. 07080

RE: I.D. 27 SOIL - DEGUSSA CORPORATION
SOUTH PLAINFIELD, N.J. 07080

DEAR MR. EVES:

PLEASE BE ADVISED THAT THIS FACILITY HAS RECEIVED AND DISPOSED OF APPROXIMATELY 400 CUBIC YARDS OF MATERIAL FROM THE ABOVE REFERENCED SITE.

SHOULD YOU HAVE any QUESTIONS ON THIS MATTER, PLEASE CONTACT THIS OFFICE.

SINCERELY,

Patrick G. Malone (LHB)

PATRICK G. MALONE

PGM:lhb

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039 Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.
2. Page 1 of 1 | Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address
DECUSSA/METZ METALLURGICAL
3900 S. CLINTON AVE. S. PLAINFIELD, NJ 07080

4. Generator's Phone ( )

A. State Manifest Document Number: NJA 1150212

B. State Generator's ID

5. Transporter 1 Company Name: HOWELTON TRUCKS, INC.
6. US EPA ID Number

C. State Trans. ID: NJS 1741101

7. Transporter 2 Company Name
8. US EPA ID Number

D. Transporter's Phone (919) 281-2220

E. State Trans. ID

9. Designated Facility Name and Site Address
ECOPLO, INC.
2750 PATTERSON ST. GREENSBORO, NC 27407
10. US EPA ID Number

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (919) 855-7425

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. OIL SPILL CLEAN UP (TRUCK REMOVAL)	05	20	M2K	100 G	P X171215
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. DEBRIS, SOIL 94%97% S
b. DIESEL FUEL 1-2 90
c. WATER 2-5%

K. Handling Codes for Wastes Listed Above
a. c.
b. d.

15. Special Handling Instructions and Additional Information
SUB # 1-1196 A. PNC 15 22-91 COT 05 84-1
BILL WEIGHTS ARE APPROX EMERGENCY CONTACT

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JAMES J BARNA | Signature | Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: RICHARD E. DIERTS | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space
21

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name: PHIL TEGG | Signature | Month Day Year

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

3 — TSD MAIL TO - GENERATOR

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

ECOFLO

8520-M Corridor Road
Savage, Maryland 20763
(301) 498-4550

2750 Patterson Street
Greensboro, NC 27407
(919) 855-7925

July 22, 1991

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN028
Trenton, NJ 08625

Dear Sir(s),

This is to inform you of a discrepency on Hazardous Waste Manifest NJA1150212. The discrepency occurred when ECOFLO personnel were preparing the manifest for our client DeGussa/ Metz Metallurical of South Plainfield, New Jersey.

The drums of material removed were not generated during a tank removal. The soil removed was generated during an oil spill cleanup. The soil was contaminated with lubricating oil, not diesel fuel as noted in Ja, on the manifest.

If you have any questions please call.

Sincerely,

David E. Mundt
Operations Manager

22

Ann A. Mullen
Chairwoman

Thomas P. Corcoran
Vice Chairman

Charles Turer
Secretary

Hugh O'Connell
Treasurer

M. Robert Panaccio
Assistant Secretary

Pollution Control Financing Authority of Camden County

Reply to: ☐ 608 Morgan Boulevard, Camden, NJ 08104
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John W. Londres
Deputy Director, Resource Recovery and Authority Operations

Joseph R. Wojcik
Clerk to the Authority

Frances C. Verna, C.P.A.
Controller

MR. ED FOX
EAST COAST TANK REMOVAL
213 O'DONNELL LANE
CINNAMINSON, N.J. 08077

RE: I.D. 27 SOIL - DEGUSSA CORPORATION
SOUTH PLAINFIELD, N.J.

DEAR ED:

PLEASE BE ADVISED THAT THIS FACILITY HAS RECEIVED AND DISPOSED OF APPROXIMATELY 840 CUBIC YARDS OF MATERIAL FROM THE ABOVE REFERENCED SITE.

SHOULD YOU HAVE ANY QUESTIONS ON THIS MATTER, PLEASE CONTACT THIS OFFICE.

SINCERELY,

PATRICK G. MALONE

PGM:LHB

23

Post-it™ brand fax transmittal memo 7671 | # of pages ▶

To: Don D.	From: Doug Long
Co.	Co. EAST Coast
Dept.	Phone: (609) 461-0999
Fax # (201) 334-5847	Fax # 829-6969

24

APPENDIX C
STREAM ENCROACHMENT FOR
FRESHWATER WETLANDS PERMIT

Notice of Authorization

Permit No.
1222-90-0007.2 SE
1222-90-0007.1 FWGP #4

Issuance Date
AUG 09 1990

Effective Date
SEP 06 1990

Expiration Date
SEP 08 1993

Issued To
Metz Metallurgical Corp.
3900 South Clinton Ave.
South Plainfield, N.J. 07080

For Activity/Facility At

Owner

Issuing Division
Coastal Resources

Type of Permit
Stream Encroachment
Freshwater Wetlands

Statute(s)
NJSA 58:16A-50
NJSA 13:9B

Application No

A Permit to
remove silver-contaminated sediments along a swale and an un-named tributary to Bound Brook, at a location immediately southwesterly of the South Clinton Avenue and Wade Avenue intersection, within Lot No. 29 of Block No. 467.01, in South Plainfield Borough, Middlesex County, New Jersey.

Wetlands
RECORDED
MIDDLESEX COUNTY
DEC 11 3 02 PM '90

DEP-006
10/85

DEP Authorization
Robert B. Piel, Jr. Manager
Bureau of Inland Regulation

This Notice Must Be Conspicuously Displayed At The Activity/Facility Site

New Jersey Department of Environmental Protection

25

REFERENCE 15

86108

ECRA CASE SUMMARY NOTICE #: (86) Case Mgr: (MMS) Cleanup M (JK) Compliance Mgr: ( )
EPA ID Date assigned: 08/09/86 Level (0-9): 5
Industrial Establishment: (METZ METALLURGICAL CORP)
aka: (METZ REFINING CO)
street: 3900 S. Clinton Ave. munic:(S. PLAINFIELD BORO county: MIDDLESEX)
zip: 07080 SIC: (3399) block(s): 467.01 lot(s): 29.01,30

Agent's name: Dawn DeBiasse
firm: CH2M Hill
street:99 Cherry Hill Road city:Parsippany, NJ zip:07054- 1102 phone:(201)316-9300

Target dates: sign agreement/option: 01/30/86 announce closing:
finalize transfer/sale: 04/09/86 terminate operations: transaction: PST
(B)ankrupt,(C)essation,(F)oreclose,sell (P)roperty/bu(S)iness,(T)ransfer stock,(X)=condemn
Law firm: McCarter English
Consultant: CH2M HILL Lab: ACCUTEST

BIS rcvd: 02/13/86 reviewed: 02/14/86 by: RJK ok?: Y ltr sent: 02/18/86 new info: 03/05/86
SES rcvd: 03/05/86 reviewed: 03/06/86 by: MSS ok?: Y ltr sent: 03/07/86 new info:

FILE REVIEWS: 06/13/86 by: MSS ltr to mayor: 02/21/86 contact H.O.: 06/13/86
other names:( )
comments: caustic solution discharge to municipal,sewer

PRELIMINARY INSP on: 06/24/86 by: MSS report sent: 07/23/86
comments: Unsound drum storage, ugst found. Interim insp. 2/20/90 by SEM.

NEG DEC company: rcvd: susp:( ) resup: denied: ok'd:
property: rcvd: susp:( ) resup: denied: ok'd:

S/P 1st: 03/05/86 latest: 08/21/89 to BEERA: 08/22/89 fm BEERA: 09/02/89 TC: CL
to DWR: 08/22/89 fm DWR: 03/31/89 unit:P or SJ: P geol: RL
peril? [Y/N]: Y soil auth: 03/08/90 gw auth: 02/18/87 ugst: # ok: 7 # ng: 1

DATA 1st:02/13/86 latest:08/17/92 to BEERA:08/19/92 fm:09/30/92 to DWR:08/06/90 fm:09/28/90
comments: 7 ugst in s/p
C/P 1st: 10/14/88 latest: 07/31/90 to BEERA:08/06/90 fm:08/22/90 to DWR:08/06/90 fm:09/28/90
peril?: N soil auth: 04/26/91 gw auth: estimates: time: 365d cost: $338.200
comments: Mtg 2/14/91-new C/U #s fm BEERA: 7/31/90 CP revised by 3/27/91 ltr
Cleanup begun: 04/26/91 spot checks: 05/29/91 completed: 08/14/92
actual time required: 477D actual cost incurred: $286,000 Cleanup Approval: 04/26/91

FINANCIAL ASSURANCE rcvd: 07/30/86 rvwr: CLD ok'd: 07/30/86 amount: $338.200
type: L expires: 05/07/92 released: 10/28/92

FINAL INSPECTION performed on: 09/29/92 by: JK
comments: On & offsite soil exc., 1250 cys of AG & CD contam soil disp. add.
soil reuse onsite above resid. @ PER $61,000 CP $225.000 T $286,000
ACO: 07/23/86 Amount: $2000000 Peril-Cost: $ 61000 Small business?: N
FEES payable: notice: $1.600 data: $.,000 neg dec: $0
s/p: $1,000 c/p: $5,000 oversight: $7,000 TOTAL PAYABLE: $15,600

STATUS: [F] date: 10/26/92 by: DS total fee paid: $15.600 date printed: 10/30/92
I=Initial Notice A=Assigned S=Sampling Plan Approval N=Negative declaration
C=Cleanup plan F=Finished Cleanup E=Exempt D=Duplicate
W=Withdrawn L=Early Filer R=Enforcement Referral M=CMS Referral

p. 1

ECRA
Environmental Concern Tracking Sheet

Page ___ of ___

INDUSTRIAL ESTABLISHMENT

Name MEJZ METALLURGICAL CORP.

City SO. PLAINFIELD Case Number 86108

VIOLATIONS

RCRA	NJPDES	APC	other WPCA	other
	✓	✓	✓	

SOURCE

Drum Storage	✓	Waste Pile		Seepage Pit		Tank Farm	
Discharge		Monitor Well		Dumpster		Transformer	
Potable Well		Floor Drain	✓	Bld. Decontam.		other	
Roof Drain	✓	Septic System		Asbestos		other	
UGST	✓	Lagoon		Spill	✓	other	

POTENTIAL AREAS OF CONTAMINATION

Location of Concern	Pollutants		Outcome
AREA A. SOIL STAINING ALONG WEST SIDE OF BLDG A. MW-103 + MW-104	PHC Ag. cd	Concentration ≤ 1852 ppm ≤ 674 ppm ≤ 178 ppm. Action Level	NO FURTHER ACTION REQ'D FOR PHC - LIMITED EXC. OF Ag & Cd CONTAM. TO C/U #'s PROPOSED. Additional soil excavated, Cd. level above proposed CUS remain Additional CU deferred, See Case [illegible] NPA 6-[illegible]
✓ AREA AWT - A SUBSET OF AREA 'A' - 86'x50' AREA EXCAVATED FOR FACILITY EXPANSION - AT PERIL SAMPLING - SOIL STOCKPILED IN AREA C	PHC Ag	Concentration ≤ 2552 ppm ≤ 154 ppm. Action Level	ALL SOIL WAS EXCAVATED TO BEDROCK FOR CONST. OF WATER TREATMENT PLANT. SAMPLES WERE POST-EX SIDEWALL. NO FURTHER ACTION REQ'D. Stockpiled soil [illegible] NFA CU deferred See CEF. 6-26-92

p. 2

New Jersey Department [illegible]

ECRA Environmental Concern Tracking Sheet *Continued*

Case Number _____

POTENTIAL AREAS OF CONTAMINATION

Location of Concern	Pollutants		Outcome
AREA B - HISTORICAL DRUM STORAGE ON EXPOSED SOILS 180'X 8' W. ALONG DRIVEWAY, SO. OF BLDG A. MW 102	PHC T1	Concentration ≤ 169 ppm ≤ 7.4 ppm Action Level	NO FURTHER ACTION REQ'D compared to CUS 6/23-92 NFA
AREA C. HISTORICAL DRUM STORAGE ON EXPOSED SOILS SOUTH OF BLDG A, WEST OF BLDG. B MW102	PHC Ag	Concentration ≤ 161 ppm ≤ 7.4 ppm Action Level	NO FURTHER ACTION REQ'D. compared to CUS 6-24-92 NFA
AREA D. EQUIP. STORAGE AREA. NEW DETENTION BASIN CONST'D TO REPLACE FORMER NPDES OUTFALL NO MWS	PHC Ag Cd	Concentration ≤ 323 ppm ≤ 75.9 ≤ 13 ppm Action Level	NO FURTHER ECRA ACTION REQ'D - REF. TO NPDES FOR SW DISCH. NPDES Permit is respon. of new tenant. CU deferred See CEF. NFA 6-22-92
AREA E. FORMER NPDES OUTFALL & TRIBUTARY STREAM ALONG NO. PR, WEST SIDE OF SITE. EXTENDS ± 500' DOWNSTREAM FROM PLANT NO MWS	Ag CU	Concentration ≤ 9,458 ppm ≤ 870 ppm Action Level	EXCAVATION OF ± 100 CU. yds OF CONTAM. SEDIMENTS PROPOSED. compared to CUS 6-22-92 CU deferred See Case Eval Form
AREA F. ±2000 GAL FUEL OIL UST NO. SIDE OF BLDG 'B.' NO MW	PHC BNs	Concentration ≤ 2406 ppm ≤ 2 ppm Action Level	TANK REMOVED PRE-1981 NO FURTHER ACTION REQ'D. compared to CUS 7-1-92 CU deferred See Case Eval. Form.
AREA G. NO. OF BLDG. A MW 101 MW 105 107	VOs	Concentration < 6 ppb (ND) Action Level	SOIL SAMPLING FOR VOs WAS REQ'D TO CONFIRM THAT VOs FOUND IN MW-105 (UPGRADIENT WELL) WERE NOT THE RESULT OF AN ON-SITE SOIL SOURCE. NO ACTION REQ'D compared to CUS 6-24-92 NFA

ECRA Environmental Concern Tracking Sheet *Continued*

POTENTIAL AREAS OF CONTAMINATION

Case Number _____

Location of Concern	Pollutants		Outcome
INSIDE FACIL: PROCESS SUMPS & SAFETY CATCHMENTS		Concentration Action Level	CONST. OF 12" CONC w/ FIBRE GLASS LINERS - PROVIDE PROCESS PUMPAGE & SPILL CONTAINMENT. INTEG EVAL. VIA MWs - NO ACTION REQ'D Compared to CUS 6-22-92 NFA Not revealed no contamination NFA 4-26-91
INSIDE FACIL. 6 FIBREGLASS USTS 1 STAINLESS UST (PATIO TANKS 1, 2, 3 & 4 TANKS D & E & #2)		Concentration Action Level	CONTAIN SOLUTIONS OF WASH LIQUIDS & PRECIOUS METALS. INTEG. EVAL'D VIA MWs - NO ACTION REQ'D Compared to CUS 6-22-92 NFA Not monitoring revealed no contam NFA 4-26-91
GROUND WATER ✓ Monitor Wells are being left open for voluntary monitoring by new operator.	VOs	Concentration ≤ 44 ppm Action Level	INVESTIGATION CONCLUDES SOURCE OF VOs (MOSTLY CARBON TET [34 ppm]) IS OFF SITE, UP GRADIENT compared to CUS 6-22-92 NFA NO FURTHER ACTION
AREA AWT STOCKPILE. ✓ Soil reused	Ag Cd Mc	Concentration ≤ 110 ppm ≤ 6.3 ppm ≤ 420 ppm Action Level	Soil from Area AWT reused to regrade other areas of site. Elevate levels of Ag & Cd exist below CPA letter site #s but above CUS. CU deferred see Case Evaluation form. NFA 6-24-92
Suspected Asbestos containing material		Concentration Action Level	Asbestos insulation material found in several pipe elbow insulation and a tank wrap in 6/91 Report. Additional remed/interm. required. Observed & area ident as asbestos in final inspect. 2 areas (pipe elbows) had been encapsulated the rest appeared [illegible] a 10-20 [illegible] NFA [illegible]
✓ property perimeter samples	Ag Cd VO's CU	Concentration Ag - 4.1 ppm Cd - <1.0 CU - 250 ~~Methyl chloride - 10 ppm~~ Action Level Ag - 40 ppm Cd - 1 ppm CU - 600 ppm Mc - [illegible] ppm	Southern perimeter sampling revealed no contamination above AL or CUS. Northern perimeter linked to Area E outfall. Soil removed & disposed levels of contamination remaining after ex below site AL & CUS NFA 6-24-92

REFERENCE 16

MIDDLESEX COUNTY UTILITIES AUTHORITY
P.O.BOX B-1, SAYREVILLE, NEW JERSEY 08872-0086
908-721-3800
(FAX) 908-721-0206

RICHARD L. FITAMANT, EXECUTIVE DIRECTOR
DONATO J. TANZI, ACTING CHIEF ENGINEER
MARGARET M. BRENNAN, COMPTROLLER
JOHN A. HILA, COUNSEL

October 5, 1995

Mr. James D. Leahey
Environmental Control Manager
Degussa Corporation/ Metal Group
3900 South Clinton Ave.
South Plainfield, NJ 07080

Re: Degussa Corporation, Metz Division, Building A-C
3900 South Clinton Ave.
South Plainfield Borough
Middlesex County
MCUA Permit No.: 24055

Dear Mr. Leahey:

Enclosed is a **MODIFIED** Middlesex County Utilities Authority Non-Domestic Wastewater Discharge Permit for the subject facility to discharge to the Middlesex County Utilities Authority, issued in accordance with Federal Regulations 40 CFR Part 403.8 and State Law N.J.S.A. 58:11-49 et seq. This modification supersedes the existing Permit previously issued to your facility. Violations of any condition of this permit may subject you to significant penalties.

Please note that this permit becomes effective as of the date stated on the permit. Application for renewal of this permit must be submitted at least 180 days prior to expiration of this permit.

If you have any further questions pertaining to this permit, please contact me, at the above number.

Very truly yours,

Kevin T. Aiello
Administrator
Environmental Quality

KTA:ml
Enc.
cc: R. J. Naberezny, S. Plainfield Boro. Eng.
D. Tanzi, MCUA

IIA. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning October 1, 1995 and lasting through July 31, 2000 the permittee is authorized to discharge from point(s) designated as TankA/B/C/D (as indicated on the "Application for Non-Domestic Wastewater Discharge", dated February 3, 1995, see Section IIE. of this permit).

The rate of discharge should not exceed a monthly average daily flow of 100,000 gallons per day nor a maximum daily flow of 200,000 gallons per day.

This facility is regulated under the MCUA Rules & Regulations and the USEPA Effluent Guidelines and Standards for:

- Inorganic Chemicals Manufacturing, 40 CFR Part 415 et. seq. Specifically, Subpart BA -Silver Nitrate Production Subcategory (PSES), 40 CFR 415.534 et.seq.;
- Non-Ferrous Metals, 40 CFR Part 421 et. seq. Specifically, Subpart L -Secondary Silver Subcategory (PSES), 40 CFR 421.120 et. seq., and Subpart X -Secondary Precious Metals Subcategory (PSES), 40 CFR 421.260 et. seq.;
- Metal Finishing, 40 CFR Part 433 et.seq. Specifically, Subpart A -Metal Finishing Subcategory (PSES), 40 CFR 433.10 et. seq.; and
- Non-ferrous Metals Forming and Metal Powders, 40 CFR Part 471 et. seq. Specifically, Subpart D - Precious Metals Forming Subcategory (PSES), 40 CFR 471.40 et. seq.

Such discharge shall be limited and monitored by the permittee as specified below;

WASTE CHARACTERISTICS [1]	DISCHARGE LIMITATIONS [2]		MINIMUM MONITORING REQUIREMENTS [3]		
	Daily Maximum	Maximum Monthly Avg.	MEASUREMENT FREQUENCY	SAMPLE TYPE	REPORTING DATES
Flow (MGD)	N/L	N/L	Monthly	N/A	Monthly
BOD5	N/L	N/L	Quarterly	Composite	Monthly
COD	N/L	N/L	Quarterly	Composite	Monthly
Total Suspended Solids	N/L	N/L	Quarterly	Composite	Monthly
Petroleum Hydrocarbons	100	N/L	Quarterly	Grab	Monthly
Ammonia (as N)	4416.738	1941.633	Monthly	Composite	Monthly
Cadmium (Total)	0.710	0.280	Monthly	Composite	Monthly
Chromium (Total)	2.578	1.592	Monthly	Composite	Monthly
Combined Metals (Total) [4]	30.232	N/L	Monthly	Composite	Monthly
Copper (Total)	45.303	21.675	Monthly	Composite	Monthly
Cyanide (Total) [5]	9.368	3.812	Monthly	Grab	Monthly
Lead (Total)	0.654	0.408	Monthly	Composite	Monthly
Nickel (Total)	3.780	2.260	Monthly	Composite	Monthly
Silver (Total)	0.699	0.350	Monthly	Composite	Monthly
Zinc (Total)	37.667	15.559	Monthly	Composite	Monthly
Total Toxic Organics [6]	1.580	N/L	Quarterly	Grab/Comp.	Monthly
pH (standard units)	5.0 < pH <	10.0	Weekly	Grab	Monthly

IIA. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS Continued

[1] All units are in mg/l, unless otherwise specified.

[2] Discharge Limitations are calculated using the Combined Wastestream Formula (40 CFR 403.6 (e)), as defined in Part II D of this permit. Any changes in the Regulated Operations must be reported to the MCUA.

[3] Special Monitoring Requirements as defined in Part IIB of this permit.

[4] Combined Metals include Gold, Palladium, and Platinum.

[5] Cyanide sampling must be taken directly following Cyanide Treatment.

[6] Total Toxic Organics are defined in Section IIC.

EXPLANATORY NOTES

Note 1 N/L: No Limitation established at this time. However, flow rates are not permit limited but used to indicate non-domestic wastewater flow changes. If the non-domestic wastewater flow changes a minimum of ten (10) percent, the permittee shall notify the MCUA in writing of the reason for such change.

Note 2 Production and Flow data shall be reported with each Self-Monitoring Report. Any significant changes in the plant's processes including production rate or flow, must be reported to the MCUA.

IIB. SPECIAL MONITORING REQUIREMENTS

(a) A semi-annual sampling frequency for Chromium, Lead, or Nickel is allowable if the following conditions are met:

1) The Authorized Representative certifies in writing that the particular metal is not used in the facility's processes.

2) The Baseline Monitoring Report data and knowledge of process support this statement.

(b) Certification of implementation of an approved Total Toxic Organics Management Plan is acceptable in lieu of organics monitoring.

IIC. TOTAL TOXIC ORGANICS

The Term "TTO" shall mean Total Toxic Organics, which is the summation of all quantifiable values greater than 0.01 milligrams per liter (10 ppb) for the following toxic organics:

Base/Neutrals

Acenaphthene
Acenaphthylene
Anthracene
Benzidine
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(ghi)perylene
Benzo(k)fluoranthene
3,4,-Benzofluoranthene
Bis(2-chloroethoxy)methane
Bis(2-chloroethyl)ether
Bis(2-chloroisopropyl)ether
Bis(2-ethylhexyl)phthalate
4-Bromophenyl phenyl ether
Butyl benzyl phthalate
2-Chloronaphthalene
4-Chorophenyl phenyl ether
Chrysene
Di-n-butyl phthalate
Di-n-octyl phthalate
Dibenzo(a,h)anthracene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
1,2,4-Trichlrobenzene
Diethyl phthalate
Dimethyl phthalate
2,4-Dinitrotoluene
2,6-Dinitrotoluene
1,2-Diphenylhyrazine
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Indeno(1,2,3-cd)pyrene
Isophorone
Naphthalene
Nitrobenzene
N-nitrosodi-n-propylamine
N-nitrosodimethylamine
N-nitrosodiphenylamine
Phenathrene
Pyrene
3,3-dichlorobenzidine
2,3,7,8-tetrachloro-dibenzo-p-dioxin

Acid Extractables

2-Chlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
4,6-Dinitro-o-cresol
2,4-Dinitrophenol
2-Nitrophenol
4-Nitrophenol
p-Chloro-m-cresol
Pentachlorophenol
Phenol
2,4,6-Trichlorophenol

Pesticides/PCBs

Aldrin
alpha-BHC
beta-BHC
gamma-BHC (Lindane)
delta-BHC
Chlordane
4,4'-DDD
4,4'-DDE
4,4'-DDT
Dieldrin
alpha-Endosulfan
beta-Endosulfan
Endosulfan sulfate
Endrin
Endrin aldehyde
Heptachlor
Heptachlor epoxide
Toxaphene
PCB-1016
PCB-1221
PCB-1232
PCB-1242
PCB-1248
PCB-1254
PCB-1260

Volatile Organics

Acrolein
Acrylonitrile
Benzene
Bis(chloromethyl)ether
Bromoform (Tribromomethane)
Carbon tetrachloride (Tetrachloromethane)
Chlorobenzene
Chlorodibromoethane
Chloroethane
2-Chloroethyl vinyl ether
Chloroform (Trichloromethane)
Dichlorobromomethane
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethylene
1,2-Dichloropropane
1,3-Dichloropropylene
Ethylbenzene
Methyl bromide (Bromomethane)
Methyl chloride (Chloromethane)
Methylene chloride (Dichloromethane)
1,1,2,2-Tetrachloroethane
Tetrachloroethylene
Toluene
1,2,-trans-Dichloroethylene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethylene
Trichlorofluromethane
Vinyl Chloride (Chloroethylene)
Xylene

Permit No.: 24055
Discharge Point: Tank A/B/C/D

IID. CALCULATION WORKSHEET

ALTERNATIVE MASS LIMIT FORMULA:

$$M_T = \sum_{i=1}^{N} M_i \quad x \quad \left[\frac{(F_T - F_D)}{\sum_{i=1}^{N} F_i} \right]$$

CONCENTRATION LIMIT FORMULA:

$$C_T = \left(\frac{M_T}{F_T} \right) \quad x \quad P$$

M_T	=	Alternative mass limit for the pollutant in the combined wastestream (mass per day)
M_i	=	Production-based categorical pretreatment standard for the pollutant in regulated stream i (or the standard multiplied by the appropriate measure of production if the standards being combined contain different units of measurement)
F_T	=	Average daily flow through the combined treatment facility (including regulated, unregulated and dilute wastestreams)
F_D	=	Average daily flow of dilute wastestream(s)
F_i	=	Average daily flow of regulated stream i
N	=	Total number of regulated streams
C_T	=	Concentration Limit for the pollutant
P	=	Conversion factor

DEGUSSA CORPORATION, METZ DIVISION (BUILDING A-C)

STANDARDS FOR DETERMINING THE MAXIMUM LIMITATIONS FOR ANY 1 DAY

WASTEWATER SOURCES	UNITS	NH3	Cd	Cr	Cu	CN	COMB. METALS	Pb	Ni	Ag	TTO	Zn
40 CFR 415, SUBPART BA (PSES)												
Silver Nitrate	mg/L	DIL	UNR	UNR	UNR	DIL	UNR	UNR	UNR	1.000	DIL	UNR
COPPER POWDER (BAT Limitations)												
Copper Powder	mg/L	UNR	DIL	DIL	2.070	DIL	DIL	UNR	UNR	UNR	UNR	UN.
40 CFR 433, SUBPART A (PSES)												
Silver Coating	mg/L	DIL	0.690	2.770	3.380	1.200	UNR	0.690	3.980	0.430	2.130	2.610
40 CFR 421, SUBPART L (PSES)												
f) Electrolytic Refining	mg/T. Oz.	101.300	UNR	UNR	0.973	UNR	UNR	UNR	UNR	UNR	UNR	0.775
h) Leaching	mg/T. Oz.	11.470	UNR	UNR	0.110	UNR	UNR	UNR	UNR	UNR	UNR	0.088
i) Leaching & Precip. NPS WAPC	mg/T. Oz.	590.500	UNR	UNR	5.671	UNR	UNR	UNR	UNR	UNR	UNR	4.519
j) Precipitation & Filtration NPS	mg/T. Oz.	409.300	UNR	UNR	3.930	UNR	UNR	UNR	UNR	UNR	UNR	3.132
40 CFR 421, SUBPART X (PSES)												
a) Furnace WAPC	mg/T. Oz.	599.900	UNR	UNR	5.760	0.900	1.350	UNR	UNR	UNR	DIL	4.590
e) Refinery WAPC	mg/T. Oz.	133.300	UNR	UNR	1.280	0.200	0.300	UNR	UNR	UNR	DIL	1.020
h) Gold Precipitation & Filtration	mg/T. Oz.	586.500	UNR	UNR	5.632	0.880	1.320	UNR	UNR	UNR	DIL	4.488
i) Platinum Precipitation & Filtration	mg/T. Oz.	693.200	UNR	UNR	6.656	1.040	1.560	UNR	UNR	UNR	DIL	5.304
j) Palladium Precipitation & Filtration	mg/T. Oz.	799.800	UNR	UNR	7.680	1.200	1.800	UNR	UNR	UNR	DIL	6.120
k) OPGM Precipitation & Filtration	mg/T. Oz.	693.200	UNR	UNR	6.656	1.040	1.560	UNR	UNR	UNR	DIL	5.304
n) Preliminary Treatment	mg/T. Oz.	6665.000	UNR	UNR	64.000	10.000	15.000	UNR	UNR	UNR	DIL	51.000
40 CFR 471, SUBPART D (PSES)												
b) Rolling Spent Emulsions	mg/Off-kg	DIL	0.026	UNR	0.147	0.023	UNR	UNR	UNR	0.032	DIL	UNR
d) Drawing Spent Emulsions	mg/Off-kg	DIL	0.016	UNR	0.091	0.014	UNR	UNR	UNR	0.020	DIL	UNR
g) Heat Treatment CCW	mg/Off-kg	DIL	0.142	UNR	0.793	0.121	UNR	UNR	UNR	0.171	DIL	UNR
k) Shot Casting CCW	mg/Off-kg	DIL	0.125	UNR	0.698	0.107	UNR	DIL	UNR	0.151	DIL	UNR
n) Surface Treatment Spent Bath	mg/Off-kg	DIL	0.033	UNR	0.183	0.028	UNR	UNR	UNR	0.040	DIL	UNR
o) Surface Treatment Rinse	mg/Off-kg	DIL	0.210	UNR	1.170	0.179	UNR	UNR	UNR	0.253	DIL	UNR
p) Alkaline Cleaning Spent Bath	mg/Off-kg	DIL	0.021	UNR	0.114	0.018	UNR	UNR	UNR	0.025	DIL	UNR
q) Alkaline Cleaning Rinse	mg/Off-kg	DIL	0.381	UNR	2.130	0.325	UNR	UNR	UNR	0.459	DIL	UNR
u) Sawing/Grinding Spent Emulsions	mg/Off-kg	DIL	0.032	UNR	0.178	0.027	UNR	UNR	UNR	0.038	DIL	UNR
Dilution Wastestream		DIL	DIL	DIL	DIL	DIL	DIL	DIL	DIL	DIL	DIL	DIL

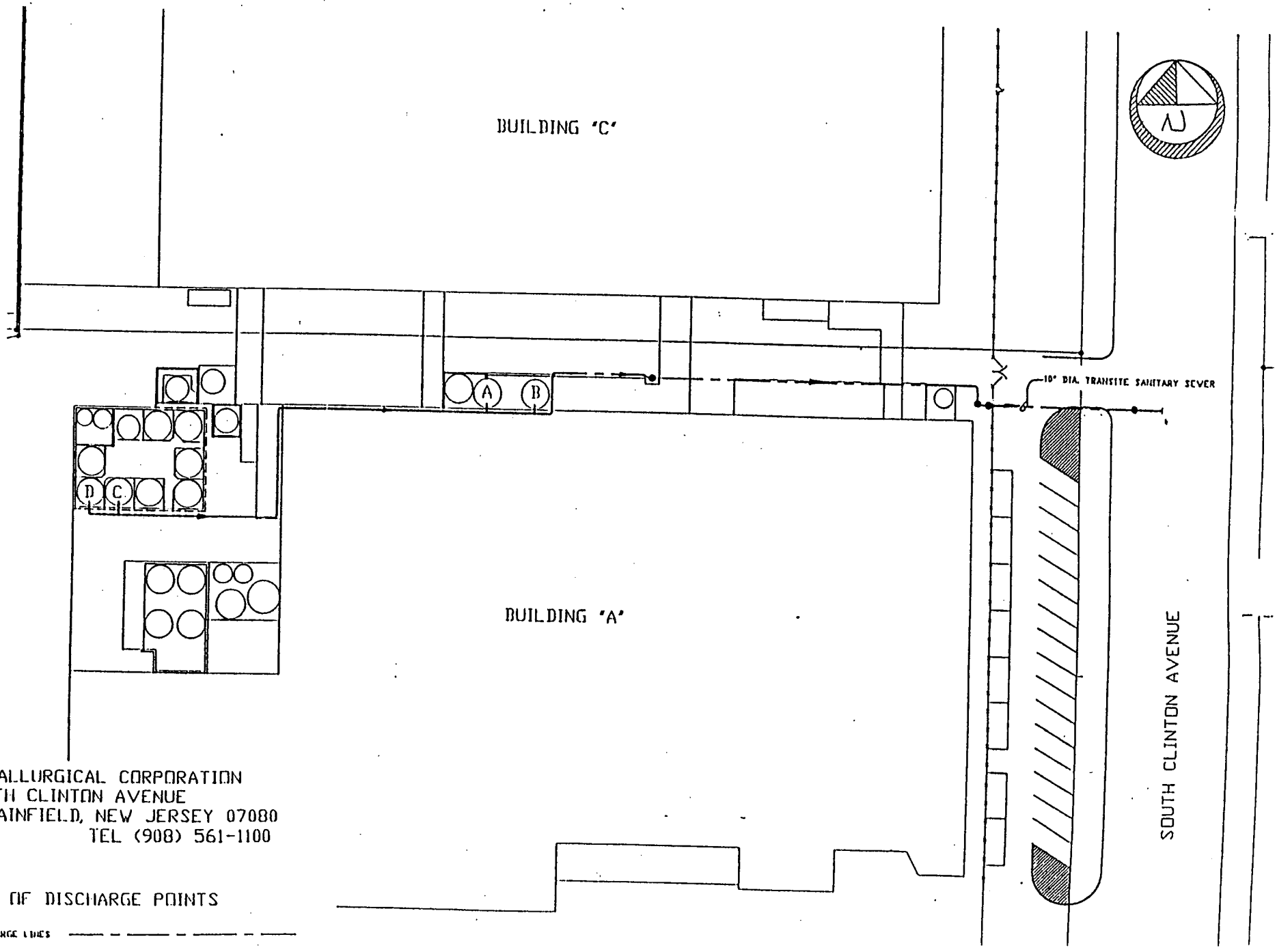
DEGUSSA CORPORATION, METZ DIVISION (BUILDING A-C)

STANDARDS FOR DETERMINING THE MAXIMUM MONTHLY AVERAGE LIMITATIONS

WASTEWATER SOURCES	UNITS	NH3	Cd	Cr	Cu	CN	COMB. METALS	Pb	Ni	Ag	TTO	Zn
40 CFR 415, SUBPART BA (PSES)												
Silver Nitrate	mg/L	DIL	UNR	UNR	UNR	DIL	UNR	UNR	UNR	0.500	DIL	UNR
COPPER POWDER (BAT Limitations)												
Copper Powder	mg/L	UNR	DIL	DIL	2.070	DIL	DIL	UNR	UNR	UNR	UNR	UNI
40 CFR 433, SUBPART A (PSES)												
Silver Coating	mg/L	DIL	0.260	1.710	2.070	0.650	UNR	0.430	2.380	0.240	N/A	1.480
40 CFR 421, SUBPART L (PSES)												
f) Electrolytic Refining	mg/T. Oz.	44.540	UNR	UNR	0.464	UNR	UNR	UNR	UNR	UNR	UNR	0.319
h) Leaching	mg/T. Oz.	5.040	UNR	UNR	0.053	UNR	UNR	UNR	UNR	UNR	UNR	0.036
i) Leaching & Precip. NPS WAPC	mg/T. Oz.	259.600	UNR	UNR	2.703	UNR	UNR	UNR	UNR	UNR	UNR	1.861
j) Precipitation & Filtration NPS	mg/T. Oz.	179.900	UNR	UNR	1.873	UNR	UNR	UNR	UNR	UNR	UNR	1.290
40 CFR 421, SUBPART X (PSES)												
a) Furnace WAPC	mg/T. Oz.	263.700	UNR	UNR	2.745	0.360	N/A	UNR	UNR	UNR	DIL	1.890
e) Refinery WAPC	mg/T. Oz.	58.600	UNR	UNR	0.610	0.080	N/A	UNR	UNR	UNR	DIL	0.420
h) Gold Precipitation & Filtration	mg/T. Oz.	257.800	UNR	UNR	2.684	0.352	N/A	UNR	UNR	UNR	DIL	1.848
i) Platinum Precipitation & Filtration	mg/T. Oz.	304.700	UNR	UNR	3.172	0.416	N/A	UNR	UNR	UNR	DIL	2.184
j) Palladium Precipitation & Filtration	mg/T. Oz.	351.600	UNR	UNR	3.660	0.480	N/A	UNR	UNR	UNR	DIL	2.520
k) OPGM Precipitation & Filtration	mg/T. Oz.	304.700	UNR	UNR	3.172	0.416	N/A	UNR	UNR	UNR	DIL	2.184
n) Preliminary Treatment	mg/T. Oz.	2930.000	UNR	UNR	30.500	4.000	N/A	UNR	UNR	UNR	DIL	21.000
40 CFR 471, SUBPART D (PSES)												
b) Rolling Spent Emulsions	mg/Off-kg	DIL	0.012	UNR	0.077	0.010	UNR	UNR	UNR	0.013	DIL	UNR
d) Drawing Spent Emulsions	mg/Off-kg	DIL	0.007	UNR	0.048	0.006	UNR	UNR	UNR	0.008	DIL	UNR
g) Heat Treatment CCW	mg/Off-kg	DIL	0.063	UNR	0.417	0.050	UNR	UNR	UNR	0.071	DIL	UNR
k) Shot Casting CCW	mg/Off-kg	DIL	0.055	UNR	0.367	0.044	UNR	DIL	UNR	0.063	DIL	UNR
n) Surface Treatment Spent Bath	mg/Off-kg	DIL	0.015	UNR	0.097	0.012	UNR	UNR	UNR	0.017	DIL	UNR
o) Surface Treatment Rinse	mg/Off-kg	DIL	0.093	UNR	0.616	0.074	UNR	UNR	UNR	0.105	DIL	UNR
p) Alkaline Cleaning Spent Bath	mg/Off-kg	DIL	0.009	UNR	0.060	0.007	UNR	UNR	UNR	0.010	DIL	UNR
q) Alkaline Cleaning Rinse	mg/Off-kg	DIL	0.168	UNR	1.120	0.135	UNR	UNR	UNR	0.191	DIL	UNR
u) Sawing/Grinding Spent Emulsions	mg/Off-kg	DIL	0.014	UNR	0.094	0.011	UNR	UNR	UNR	0.016	DIL	UNR
Dilution Wastestream		DIL	DIL	DIL	DIL	DIL	DIL	DIL	DIL	DIL	DIL	DIL

Permit No. 24055
Discharge Point: Tank A/B/C/D

IIE. MONITORING POINT LOCATION(S)



METZ METALLURGICAL CORPORATION
3900 SOUTH CLINTON AVENUE
SOUTH PLAINFIELD, NEW JERSEY 07080
TEL (908) 561-1100

SCHEMATIC OF DISCHARGE POINTS

UNDERGROUND DISCHARGE LINES

MIDDLESEX COUNTY UTILITIES AUTHORITY

Self-Monitoring Report
Transmittal Sheet

MCUA Permit No.: _____

Reporting Period: _____ through _____

Permittee: Name _____

Address _____

_____

Facility: Name _____

Address _____

_____

Telephone No. _____

OPERATING EXCEPTIONS

	Yes	No
Dye Testing	___	___
Temporary Bypassing	___	___
Monitoring Malfunctions	___	___
Units Out of Operation	___	___
Other	___	___

(Detail any "yes" on a separate sheet of paper.)

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true , accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

_____ _____
Signature of Authorized Representative Date

_____
Type or Print Name and Title of Authorized Representative

MIDDLESEX COUNTY UTILITIES AUTHORITY (MCUA)
SELF-MONITORING REPORT (SMR)

PERMITEE NAME / ADDRESS

NAME: DEGUSSA CORPORATION, METZ DIVISION

ADDRESS: 3900 SOUTH CLINTON AVENUE

SOUTH PLAINFIELD, NEW JERSEY 07080

MCUA PERMIT NUMBER: 24055 DISCHARGE POINT: TANK A/B/C/D

MONITORING PERIOD: FROM _____ TO _____

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				# OF VIOS.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
FLOW	Sample Measurement				******	******	******				
50050 EFFLUENT GROSS VALUE	Permit Requirement	0.1000 30-DAY AVG.	0.2000 DAILY MAX	MGD	******	******	******	***		MONTHLY	N/A
pH	Sample Measurement	******	******			******					
00400 EFFLUENT GROSS VALUE	Permit Requirement	******	******	***	6.0 MINIMUM	******	10.0 MAXIMUM	S.U.		WEEKLY	GRAB
BOD, 5-DAY	Sample Measurement				******						
00310 EFFLUENT GROSS VALUE	Permit Requirement	REPORT 30-DAY AVG.	REPORT DAILY MAX	KG/DAY	******	REPORT 30-DAY AVG.	REPORT DAILY MAX	MG/L		QUARTERLY	COMP.
COD	Sample Measurement				******						
00340 EFFLUENT GROSS VALUE	Permit Requirement	REPORT 30-DAY AVG.	REPORT DAILY MAX	KG/DAY	******	REPORT 30-DAY AVG.	REPORT DAILY MAX	MG/L		QUARTERLY	COMP.
TOTAL SUSPENDED SOLIDS (TSS)	Sample Measurement				******						
00530 EFFLUENT GROSS VALUE	Permit Requirement	REPORT 30-DAY AVG.	REPORT DAILY MAX	KG/DAY	******	REPORT 30-DAY AVG.	REPORT DAILY MAX	MG/L		QUARTERLY	COMP.
TOTAL PETROLEUM HYDROCARBONS	Sample Measurement	******			******	******					
00551 EFFLUENT GROSS VALUE	Permit Requirement	******	REPORT DAILY MAX	KG/DAY	******	******	100 DAILY MAX	MG/L		QUARTERLY	GRAB
CYANIDE, TOTAL	Sample Measurement				******						
00720 EFFLUENT GROSS VALUE	Permit Requirement	REPORT 30-DAY AVG.	REPORT DAILY MAX	KG/DAY	******	3.812 30-DAY AVG.	9.368 DAILY MAX	MG/L		MONTHLY	GRAB

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION. I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

NAME / TITLE OF AUTHORIZED REPRESENTATIVE	SIGNATURE OF AUTHORIZED REPRESENTATIVE	TELEPHONE: AREA CODE	TELEPHONE: NUMBER	DATE: YEAR	DATE: MO	DATE: DAY

ATTACH COMMENTS AND EXPLANATIONS OF ANY VIOLATIONS

MIDDLESEX COUNTY UTILITIES AUTHORITY (MCUA)
SELF-MONITORING REPORT (SMR)

PERMITEE NAME / ADDRESS

NAME: DEGUSSA CORPORATION, METZ DIVISION

ADDRESS: 3900 SOUTH CLINTON AVENUE

SOUTH PLAINFIELD, NEW JERSEY 07080

MCUA PERMIT NUMBER: 24055 DISCHARGE POINT: TANK A/B/C/D

MONITORING PERIOD: FROM _____ TO _____

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				# OF VIOS.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
AMMONIA (as N), TOTAL	Sample Measurement				******						
00610 EFFLUENT GROSS VALUE	Permit Requirement	REPORT 30-DAY AVG.	REPORT DAILY MAX	KG DAY	******	1941.633 30-DAY AVG.	4416.738 DAILY MAX	MG L		MONTHLY	COMP.
CHROMIUM, TOTAL	Sample Measurement				******						
01027 EFFLUENT GROSS VALUE	Permit Requirement	REPORT 30-DAY AVG.	REPORT DAILY MAX	KG DAY	******	1.692 30-DAY AVG.	2.678 DAILY MAX	MG L		MONTHLY	COMP.
CADMIUM, TOTAL	Sample Measurement				******						
01027 EFFLUENT GROSS VALUE	Permit Requirement	REPORT 30-DAY AVG.	REPORT DAILY MAX	KG DAY	******	0.280 30-DAY AVG.	0.710 DAILY MAX	MG L		MONTHLY	COMP.
COPPER, TOTAL	Sample Measurement				******						
01042 EFFLUENT GROSS VALUE	Permit Requirement	REPORT 30-DAY AVG.	REPORT DAILY MAX	KG DAY	******	21.676 30-DAY AVG.	46.303 DAILY MAX	MG L		MONTHLY	COMP.
LEAD, TOTAL	Sample Measurement				******						
01051 EFFLUENT GROSS VALUE	Permit Requirement	REPORT 30-DAY AVG.	REPORT DAILY MAX	KG DAY	******	0.408 30-DAY AVG.	0.864 DAILY MAX	MG L		MONTHLY	COMP.
NICKEL, TOTAL	Sample Measurement				******						
01067 EFFLUENT GROSS VALUE	Permit Requirement	REPORT 30-DAY AVG.	REPORT DAILY MAX	KG DAY	******	2.260 30-DAY AVG.	3.780 DAILY MAX	MG L		MONTHLY	COMP.
SILVER, TOTAL	Sample Measurement				******						
01077 EFFLUENT GROSS VALUE	Permit Requirement	REPORT 30-DAY AVG.	REPORT DAILY MAX	KG DAY	******	0.360 30-DAY AVG.	0.699 DAILY MAX	MG L		MONTHLY	COMP.

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION. I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

NAME / TITLE OF AUTHORIZED REPRESENTATIVE	SIGNATURE OF AUTHORIZED REPRESENTATIVE	TELEPHONE: AREA CODE	TELEPHONE: NUMBER	DATE: YEAR	DATE: MO	DATE: DAY

ATTACH COMMENTS AND EXPLANATIONS OF ANY VIOLATIONS

MIDDLESEX COUNTY UTILITIES AUTHORITY (MCUA)
SELF-MONITORING REPORT (SMR)

PERMITEE NAME / ADDRESS

NAME: DEGUSSA CORPORATION, METZ DIVISION

ADDRESS: 3900 SOUTH CLINTON AVENUE

SOUTH PLAINFIELD, NEW JERSEY 07080

MCUA PERMIT NUMBER: 24055 DISCHARGE POINT: TANK A/B/C/D

MONITORING PERIOD: FROM _____ TO _____

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				# OF VIOS.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
ZINC, TOTAL	Sample Measurement				.....						
00720 EFFLUENT GROSS VALUE	Permit Requirement	REPORT 30-DAY AVG.	REPORT DAILY MAX	KG/DAY	.....	16.559 30-DAY AVG.	37.667 DAILY MAX	MG/L		MONTHLY	COMP.
COMBINED METALS, TOTAL	Sample Measurement				.....						
99990 EFFLUENT GROSS VALUE	Permit Requirement	REPORT 30-DAY AVG.	REPORT DAILY MAX	KG/DAY	.....	REPORT 30-DAY AVG.	30.232 DAILY MAX	MG/L		MONTHLY	COMP.
TOTAL TOXIC ORGANICS	Sample Measurement				.....						
00005 EFFLUENT GROSS VALUE	Permit Requirement	REPORT 30-DAY AVG.	REPORT DAILY MAX	KG/DAY	.....	REPORT 30-DAY AVG.	1.649 DAILY MAX	MG/L		QUARTERLY	GRAB/ COMP.

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION. I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

NAME / TITLE OF AUTHORIZED REPRESENTATIVE	SIGNATURE OF AUTHORIZED REPRESENTATIVE	TELEPHONE: AREA CODE	TELEPHONE: NUMBER	DATE: YEAR	DATE: MO	DATE: DAY

ATTACH COMMENTS AND EXPLANATIONS OF ANY VIOLATIONS

REFERENCE 17

Engineers
Planners
Economists
Scientists

JUN 18 12 10 PM '91

June 14, 1991

NJO26404.A0

Mr. John Kosher, Case Manager, Cleanup Oversight
Bureau of Environmental Evaluation and
Cleanup Responsibility Assessment
NJDEP/Division of Waste Management
CN028, 401 East State Street
Trenton, New Jersey 08625

Dear Mr. Kosher:

Subject: Monthly Progress Report for Metz Metallurgical Corporation, South Plainfield, New Jersey
ECRA Case # 86108

On the behalf of Metz Metallurgical Corporation, CH2M HILL respectfully submits the attached Monthly Progress Report.

A Report of Remedial Activity in Area A is attached to the Progress Report. The report documents cleanup activities and presents confirmatory sampling results. We look forward to receipt of NJDEP's concurrence that no further action is required in Area A, so that the long delayed paving operation may be completed.

Please feel free to call me at (201) 316-9300, if you have any questions on the report, or the facility.

Sincerely,

CH2M HILL

Paul B Dahlgren

Paul B. Dahlgren
Project Manager

NJC6/001C6.51
Enclosures
cc: Peter Metz
Scott Eves

p.1

CH2M HILL North Atlantic Regional Office 99 Cherry Hill Road, Suite 304
Parsippany, New Jersey 07054-1102 201.316.9300

MONTHLY PROGRESS REPORT

METZ METALLURGICAL CORPORATION
SOUTH PLAINFIELD, NEW JERSEY

ECRA CASE # 86108

Report No. 01
June 14, 1991

1. PROJECT SCHEDULE

A schedule of cleanup activities is attached. Significant activities related to the cleanup of Area E (silver spill in the stream bed) are scheduled for the next month. Stream sediment excavated during Phase I operations (December 1990) have been accepted for use as landfill cover at Pennsauken Sanitary Landfill, Pennsauken, New Jersey. Loading and transportation of the sediment is scheduled for the week of June 10, 1991. Phase II operations in Area E are scheduled to begin on June 17. Excavation is expected to be complete within 2-weeks. Post excavation confirmation samples will be analyzed in the Metz laboratory for screening use. Confirmation analysis by a New Jersey Certified Laboratory is anticipated by the last week of July.

Collection of perimeter samples PS-7 through PS-10 has been postponed until Area E cleanup is complete. These samples will be collected after screening samples indicate that the cleanup is complete. Analysis is anticipated to be compete by the middle or end of July.

A report from the asbestos survey is anticipated prior to submittal of Monthly Report No. 02 on July 15, 1991.

2. COSTS INCURRED TO DATE

A detailed accounting of cleanup costs incurred to date is not available at this time. It is estimated that approximately $53,000 has been expended.

3. WORK COMPLETED TO DATE

As shown on the attached schedule, 5 items have been completed.

Area A - Two portions of Area A contained silver and/or cadmium at concentrations above onsite cleanup levels. These have been delineated and excavated. A report of activities in Area A, complete with the Tier II data package for the confirmation samples is attached.

AWT Stockpile - A portion of this soil stockpile contained Base Neutral (BN) compounds above cleanup levels. On May 28, 1991, this portion of the pile was placed in drums for out of state non-hazardous disposal. Confirmation samples from the edges and base of the BN contaminated portion were taken, but results have not yet been received. A detailed report and data package will be submitted when laboratory analysis is complete.

Area E, Phase I - Cleanup activities were initiated in November 1990. Sediment from the offsite and onsite portions of the stream bed was excavated and returned to the Metz site for storage prior to disposal. Confirmation samples were collected in duplicate from each sample station. One sample from each pair was analyzed in the Metz laboratory, for screening purposes. If these samples had demonstrated that the cleanup levels had been achieved, the split sample would have been sent for analysis at a New Jersey Certified Laboratory. However, the screening samples indicated that the contamination was not removed to the appropriate levels. The volume of contaminated soil excavated presented unanticipated logistical difficulties. Due to space limitations, completion of the Area E cleanup could not begin until the initial soil was classified and disposed of offsite. Since the cleanup levels have not been achieved, no Tier II data are available. A detailed report and data package will be prepared and submitted at the conclusion of Phase II.

Perimeter samples - Silver and cadmium was found in perimeter samples PS-1, PS-2 and PS-3 during previously reported sample operations. Operations have been conducted in February, March and May, to excavate soil from the perimeter with concentrations above the onsite cleanup levels. Screening samples have been run in the Metz laboratory, with split samples collected for analysis in a certified laboratory. Based on the Metz laboratory results, the operations in these locations are complete. A detailed report will be submitted along with Tier II analytic data, when available.

Asbestos survey - A Certified Industrial Hygienist has been retained to conduct a survey of the plant, as requested by NJDEP. The survey has been conducted, but analysis of the bulk samples collected has not been completed. The report will be transmitted to the NJDEP when available.

4. PERCENT OF CLEANUP WORK COMPLETED

Approximately 66 percent of the cleanup operation is complete at this time.

5. CLEANUP WORK REMAINING

The following items remain to be completed:

Area A - none.

AWT Stockpile - data analysis and reporting; offsite soil disposal.

Area E - offsite disposal of Phase I soil; excavation, sampling and analysis of Phase II; classification and disposal of Phase II; reporting.

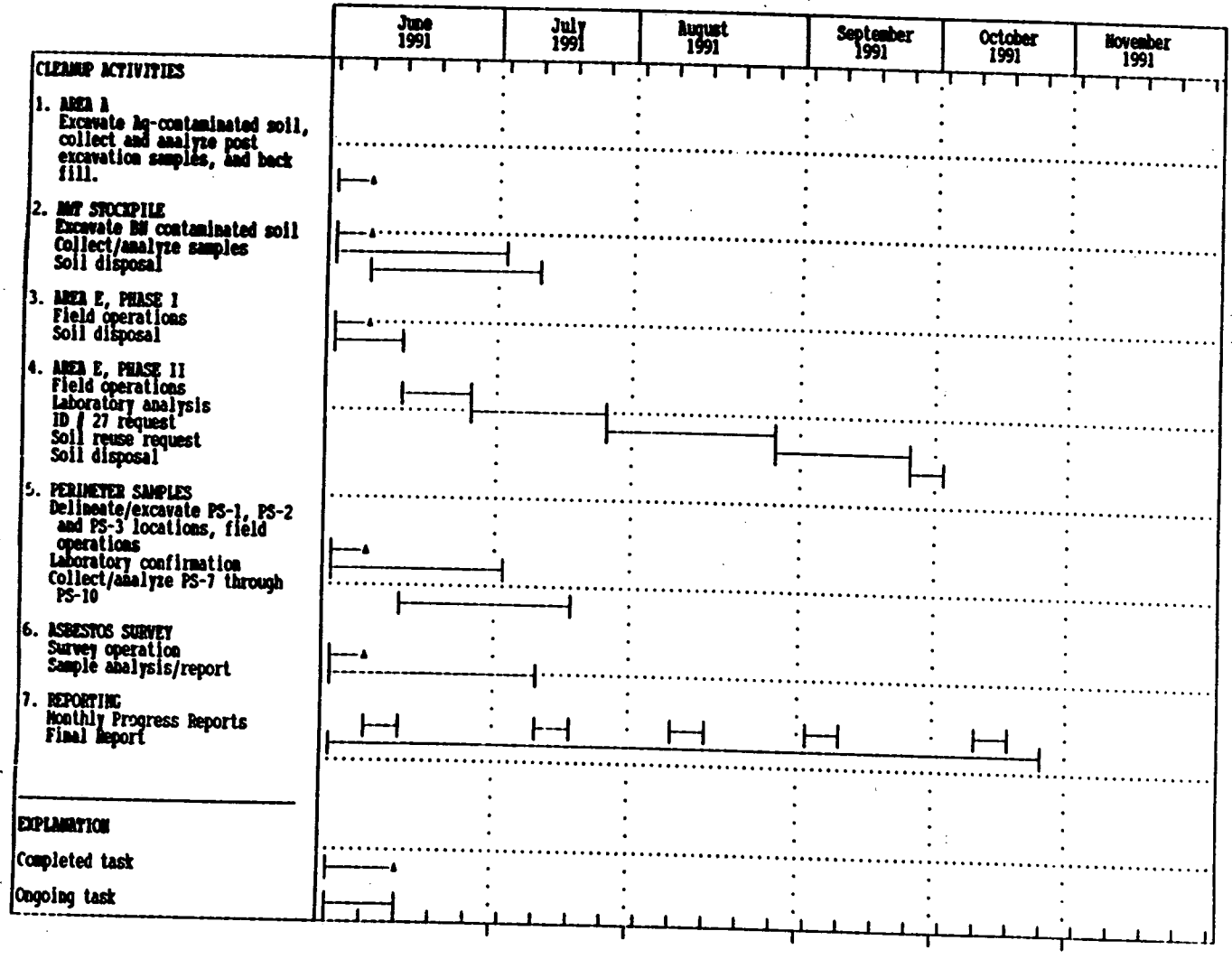
Perimeter samples - analysis and reporting of PS-1, PS-2 and PS-3 results; collection and analysis of PS-7 through PS-10.

Asbestos survey - analysis and reporting.

Metz Metallurgical Corporation
South Plainfield, New Jersey

BCRA Case No. 86108

Monthly Progress Report No. 01 June 14, 1991



P.5

AREA A REMEDIAL ACTIVITY
FEBRUARY 1991

In accordance with the revised ECRA Cleanup Plan for Metz Metallurgical Corporation (Metz), remedial activities were required in portions of Area A. These activities, which were completed in February, 1991, consisted of soil excavation, post-excavation confirmation sampling, and temporary storage of the soil prior to final disposition.

ENVIRONMENTAL CONCERN

Contaminant distribution in Area A was delineated in multiple sampling episodes, which were summarized and presented in the Report of Analytic Results (RAR) (CH2M HILL, July 1990). Cleanup levels for silver and cadmium (200 ppm and 110 ppm respectively) were provided to Metz and CH2M HILL in a meeting with the NJDEP on February 14, 1991, and were confirmed in the Cleanup Plan Approval (issued April 26, 1991 and received May 1, 1991). The onsite cleanup levels for silver and/or cadmium were exceeded at two locations in Area A (see Figure 1):

- Vicinity of former sample location A-10, in the southeast corner of Area A
- Vicinity of former sample locations A-7 and A-8, in the east central portion of Area A

Silver and cadmium, along with nickel and chromium, which were detected in the original A-10 sample, were fully delineated around A-10 in locations A-10-a through A-10-d, as presented in the RAR.

The location of original sample A-7 is no longer accessible. A concrete pad was constructed at grade in 1988, as a base for a trash compactor. The nearest available sampling locations were sampled in April 1990, to delineate the northern and western extent of the A-7 contamination (samples A-7-a, A-7-b and A-19, as shown on Figure 1). Analytic results (presented in the RAR) documented that the concentrations above onsite cleanup levels are confined beneath the concrete pad to the north and west.

REMEDIAL ACTIVITIES

Remedial activities were conducted at A-8 and A-10 on February 26, 1991 and February 28, 1991 respectively. A 10-foot square, 1.5-foot deep area around A-8 was excavated and post-excavation samples were taken for silver analysis. Sample locations A-8-a and A-8-b were collected at the southern and western limits of the excavation, at grade, to confirm that the lateral extent of the contamination had been removed. In addition, a sample was collected at the center of the excavation, directly beneath original A-8, at 1.5 feet below original grade, to confirm that the vertical extent of contaminants had been

p.6

removed. Sample splits were analyzed for silver in the Metz laboratory, for screening purposes only. After the Metz laboratory demonstrated that the limits of contamination had been achieved, the remaining split from each sample was prepared for shipment to a New Jersey Certified laboratory.

At former sample A-10, a 20-foot by 15-foot area was excavated to a 1.5-foot depth. The dimensions of this excavation were defined by former delineation samples A-10-a through A-10-d, which had already defined the extent of contamination. Due to clerical error, five redundant post-excavation samples were taken for chromium analysis. One was collected beneath the location of former sample A-10, 1.5-feet below original grade. In addition, samples were collected at the locations of former samples A-10-a through A-10-d at grade, to confirm that the lateral extent of contamination was bounded by the excavation. As described above, split samples were collected at each location, to allow rapid evaluation of the success of the remedial approach in the Metz laboratory. The remaining splits were prepared for analysis in a New Jersey Certified laboratory.

Both excavations were backfilled with soil from the Area C stockpile, in accordance with Item II-6 of the NJDEP Cleanup Plan Approval letter (April 26, 1991).

The soil excavated from Area A was stockpiled temporarily onsite, along with soil excavated from Area E. The soil was classified as ID #27 Non-Hazardous Industrial Waste and has been accepted for reuse as landfill cover at the Pennsauken Landfill. Transportation to Pennsauken is anticipated in June 1991.

RESULTS

Sample analysis was performed at Accutest Laboratory, Dayton, New Jersey (Certification Number 12129). Analytic results of the samples from the vicinity of A-8 are shown on Figure 1. Results of the chromium samples from the vicinity of A-10, which were all below the cleanup level of 100 ppm, are included with the Tier II laboratory deliverable package, which is attached.

The sample results confirm that remedial activities to remove contaminants at concentrations above cleanup levels were successful in Area A.

Metz and Degussa Corporation (the current site owners/operators) would like to pave all of Area A as soon as possible. Pavement would not only facilitate good housekeeping on the plant, but would also prevent future soil contamination and would prevent erosion and migration of soil with contaminants at concentrations below onsite cleanup level but above offsite action level. Therefore, Metz and CH2M HILL request that the NJDEP confirm that no further action is required in Area A, so that the pavement can be installed.

DRPSR DATA REVIEW CHECKLIST SUPPLEMENT

Case Name Metz Metallurgical

Case Number 86108

Laboratory Name(s) Accutest

RP Submitting Data CH2M Hill (agent) - Peter Melz - R.P.

Date of Document 6-14-91

Document Reviewed Yes / Soils

QA/QC review complete - YES or NO

Once the QA review is complete, attach the analytical results summary sheets to this form and discard the QA/QC data. Attach this form and the summary sheets to the appropriate DRPSR Data Review Checklist or support group comments and include in the case file.

Note: Please be advised that the full QA/QC package has not been retained in the file. For copies, please contact the laboratory or the owner or operator referenced in the file. NJ certified laboratories are required to retain lab deliverables for a minimum of five years.

[signature] 6/17/92

Signature/Date

p.8

ACCUTEST

CH2M HILL
99 CHERRY HILL ROAD
PARSIPPANY, NJ 07054

ATTN: DAWN DEBIASSE

DATE: 03/26/91
JOB No: 911412
PROJECT No: NJO26404.AO
SAMPLE RECEIVED: 03/06/91

SAMPLE SUMMARY

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E106269	02/26/91	11:45	DD	SOIL - A-8 (1.5-2.0) METZ
E106270	02/26/91	11:50	DD	SOIL - A-8A (0-0.5) METZ
E106271	02/26/91	12:00	DD	SOIL - A-8B (0-0.5) METZ
E106272	02/28/91	08:30	DD	SOIL - A-10 (1.5-2.0) METZ
E106273	02/28/91	08:35	DD	SOIL - A-10A (0-0.5) METZ
E106274	02/28/91	08:37	DD	SOIL - A-10B (0.-0.5) METZ

VINCENT J. PUGLIESE
VICE PRESIDENT

p.9

ACCUTEST

2235 ROUTE 130 DAYTON, NJ 08810 • (201) 329-0200

CH2M HILL
99 CHERRY HILL ROAD
PARSIPPANY, NJ 07054

ATTN: DAWN DEBIASSE

DATE: 03/26/91
JOB No: 911412
PROJECT No: NJO26404.AO
SAMPLE RECEIVED: 03/06/91

SAMPLE SUMMARY

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E106275	02/28/91	08:40	DD	SOIL - A-10C (0-0.5) METZ
E106276	02/28/91	08:42	DD	SOIL - A-10D (0-0.5) METZ

VINCENT J. PUGLIESE
VICE PRESIDENT

p.10

ACCUTEST
2235 ROUTE 130 DAYTON, NJ 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E106269	02/26/91	11:45	DD	SOIL - A-8 (1.5-2.0) METZ

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SILVER	8.6	3.0	MG/KG	03/22/91	JMC

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS

VINCENT J. PUGLIESE
VICE-PRESIDENT

p.11

ACCUTEST
2235 ROUTE 130 DAYTON NJ 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E106269	02/26/91	11:45	DD	SOIL - A-8 (1.5-2.0) METZ

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SOLIDS, TOTAL PERCENT	90	2.0	%	03/07/91	SE

MG/KG = PPM UG/KG = PPB
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS

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VICE-PRESIDENT

p.12

ACCUTEST

2235 ROUTE 130, DAYTON, NJ 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E106270	02/26/91	11:50	DD	SOIL - A-8A (0-0.5) METZ

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SILVER	7.7	3.0	MG/KG	03/22/91	JMC

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS

VINCENT J. PUGLIESE
VICE-PRESIDENT

p.13

ACCUTEST
2235 ROUTE 130 DAYTON NJ 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E106270	02/26/91	11:50	DD	SOIL - A-8A (0-0.5) METZ

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SOLIDS, TOTAL PERCENT	90	2.0	%	03/07/91	SE

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS

VINCENT J. PUGLIESE
VICE-PRESIDENT

p.14

7

ACCUTEST
2235 ROUTE 130 DAYTON NJ 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E106271	02/26/91	12:00	DD	SOIL - A-8B (0-0.5) METZ

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SILVER	38	3.0	MG/KG	03/22/91	JMC

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS

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VICE-PRESIDENT

p.15

ACCUTEST
2235 ROUTE 130, DAYTON, NJ 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E106271	02/26/91	12:00	DD	SOIL - A-8B (0-0.5) METZ

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SOLIDS, TOTAL PERCENT	90	2.0	%	03/07/91	SG

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS

VINCENT J. PUGLIESE
VICE-PRESIDENT

p.16

ACCUTEST
2235 ROUTE 130 DAYTON NJ 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E106272	02/28/91	08:30	DD	SOIL - A-10 (1.5-2.0) METZ

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
CHROMIUM	20	2.5	MG/KG	03/18/91	TPM

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS

VINCENT J. PUGLISSE
VICE-PRESIDENT

p.17

3.2

ACCUTEST
2235 ROUTE 130 DAYTON, NJ 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E106272	02/28/91	08:30	DD	SOIL - A-10 (1.5-2.0) METZ

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SOLIDS, TOTAL PERCENT	92	2.0	%	03/07/91	SE

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS

VINCENT J. PUGLISSE
VICE-PRESIDENT

P. 18

ACCUTEST
2235 ROUTE 130 DAYTON NJ 08810 • (201) 329-0200

ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E106273	02/28/91	08:35	DD	SOIL - A-10A (0-0.5) METZ

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
CHROMIUM	21	2.5	MG/KG	03/18/91	TPN

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS

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VICE-PRESIDENT

p.19

ACCUTEST
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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E106273	02/28/91	08:35	DD	SOIL - A-10A (0-0.5) METZ

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SOLIDS, TOTAL PERCENT	89	2.0	%	03/07/91	SK

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E106274	02/28/91	08:37	DD	SOIL - A-10B (0.-0.5) METZ

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
CHROMIUM	31	2.5	MG/KG	03/18/91	TPM

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E106274	02/28/91	08:37	DD	SOIL - A-10B (0.-0.5) METZ

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SOLIDS, TOTAL PERCENT	79	2.0	%	03/07/91	SE

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E106275	02/28/91	08:40	DD	SOIL - A-10C (0-0.5) METZ

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
CHROMIUM	18	2.5	MG/KG	03/18/91	TPN

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS

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p. 23

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E106275	02/28/91	08:40	DD	SOIL - A-10C (0-0.5) METZ

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SOLIDS, TOTAL PERCENT	88	2.0	%	03/07/91	SK

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS

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p. 24

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E106276	02/28/91	08:42	DD	SOIL - A-10D (0-0.5) METZ

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
CHROMIUM	29	2.5	MG/KG	03/18/91	TPM

p.25

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS

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ANALYSIS REPORT

SAMPLE No	COLLECTED DATE	TIME	BY	POINT OF COLLECTION
E106276	02/28/91	08:42	DD	SOIL - A-10D (0-0.5) METZ.

TEST DESCRIPTION	RESULT	MDL	UNITS	DATE	INITS
SOLIDS, TOTAL PERCENT	77	2.0	%	03/07/91	SE

UG/KG = PPB MG/KG = PPM
MDL = METHOD DETECTION LIMIT
ALL RESULTS REPORTED ON A DRY WEIGHT BASIS

VINCENT J. PUGLIESE
VICE-PRESIDENT

p. 26

19

REFERENCE 18

United States
Environmental Protection
Agency

Office of Solid Waste and
Emergency Response
Washington, DC 20460

EPA/540/R95/128
May 1996

Superfund

Soil Screening Guidance: Technical Background Document

Second Edition

APPENDIX A

Generic SSLs

APPENDIX A

Generic SSLs

Table A-1 provides generic SSLs for 110 chemicals. Generic SSLs are derived using default values in the standardized equations presented in Part 2 of this document. The default values (listed in Table A-2) are conservative and are likely to be protective for the majority of site conditions across the nation.

However, the generic SSLs are not necessarily protective of all known human exposure pathways, reasonable land uses, or ecological threats. Thus, before applying generic SSLs at a site, it is extremely important to compare the conceptual site model (see the *User's Guide)* with the assumptions behind the SSLs to ensure that the site conditions and exposure pathways match those used to develop generic SSLs (see Parts 1 and 2 and Table A-2). If this comparison indicates that the site is more complex than the SSL scenario, or that there are significant exposure pathways **not** accounted for by the SSLs, then generic SSLs are not sufficient for a full evaluation of the site. A more detailed site-specific approach will be necessary to evaluate the additional pathways or site conditions.

Generic SSLs are presented separately for major pathways of concern in both surface and subsurface soils. The first column to the right of the chemical name presents levels based on direct ingestion of soil and the second column presents levels based on inhalation. As discussed in the *User's Guide*, the fugitive dust pathway may be of concern for certain metals but does not appear to be of concern for organic compounds. Therefore, SSLs for the fugitive dust pathway are only presented for inorganic compounds. Except for mercury, no SSLs for the inhalation of volatiles pathway are provided for inorganic compounds because these chemicals are not volatile.

The user should note that several of the generic SSLs for the inhalation of volatiles pathway are determined by the soil saturation concentration (C_{sat}), which is used to address and screen the potential presence of nonaqueous phase liquids (NAPLs). As explained in Section 2.4.4, for compounds that are liquid at ambient soil temperature, concentrations above C_{sat} indicate a potential for free-phase liquid contamination to be present and the need for additional investigation.

The third column presents generic SSL values for the migration to ground water pathway developed using a default DAF (dilution-attenuation factor) of 20 to account for natural processes that reduce contaminant concentrations in the subsurface (see Section 2.5.6). SSLs in Table A-1 are rounded to two significant figures except for values less than 10, which are rounded to one significant figure. Note that the 20 DAF values in Table A-1 are not exactly 20 times the 1 DAF values because each SSL is calculated independently in both the 20 DAF and 1 DAF columns, with the final value presented according to the aforementioned rounding conventions.

The fourth column contains the generic SSLs for the migration to ground water pathway developed assuming no dilution or attenuation between the source and the receptor well (i.e., a DAF of 1). These values can be used at sites where little or no dilution or attenuation of soil leachate concentrations is expected at a site (e.g., sites with shallow water tables, fractured media, karst topography, or source size greater than 30 acres).

Generally, if an SSL is not exceeded for a pathway of concern, the user may eliminate the pathway or areas of the site from further investigation. If more than one exposure pathway is of concern, the lowest SSL should be used.

Table A-1. Generic SSLs [a]

Organics				Migration to ground water	
CAS No.	Compound	Ingestion (mg/kg)	Inhalation volatiles (mg/kg)	20 DAF (mg/kg)	1 DAF (mg/kg)
83-32-9	Acenaphthene	4,700 [b]	--- [c]	570 [b]	29 [b]
67-64-1	Acetone	7,800 [b]	1.0E+05 [d]	16 [b]	0.8 [b]
309-00-2	Aldrin	0.04 [e]	3 [e]	0.5 [e]	0.02 [e]
120-12-7	Anthracene	23,000 [b]	--- [c]	12,000 [b]	590 [b]
56-55-3	Benz(*a*)anthracene	0.9 [e]	--- [c]	2 [e]	0.08 [e,f]
71-43-2	Benzene	22 [e]	0.8 [e]	0.03	0.002 [f]
205-99-2	Benzo(*b*)fluoranthene	0.9 [e]	--- [c]	5 [e]	0.2 [e,f]
207-08-9	Benzo(*k*)fluoranthene	9 [e]	--- [c]	49 [e]	2 [e]
65-85-0	Benzoic acid	3.1E+05 [b]	--- [c]	400 [b,i]	20 [b,i]
50-32-8	Benzo(*a*)pyrene	0.09 [e,f]	--- [c]	8	0.4
111-44-4	Bis(2-chloroethyl)ether	0.6 [e]	0.2 [e,f]	0.0004 [e,f]	2E-05 [e,f]
117-81-7	Bis(2-ethylhexyl)phthalate	46 [e]	31,000 [d]	3,600	180
75-27-4	Bromodichloromethane	10 [e]	3,000 [d]	0.6	0.03
75-25-2	Bromoform	81 [e]	53 [e]	0.8	0.04
71-36-3	Butanol	7,800 [b]	10,000 [d]	17 [b]	0.9 [b]
85-68-7	Butyl benzyl phthalate	16,000 [b]	930 [d]	930 [d]	810 [b]
86-74-8	Carbazole	32 [e]	--- [c]	0.6 [e]	0.03 [e,f]
75-15-0	Carbon disulfide	7,800 [b]	720 [d]	32 [b]	2 [b]
56-23-5	Carbon tetrachloride	5 [e]	0.3 [e]	0.07	0.003 [f]
57-74-9	Chlordane	0.5 [e]	20 [e]	10	0.5
106-47-8	*p*-Chloroaniline	310 [b]	--- [c]	0.7 [b]	0.03 [b,f]
108-90-7	Chlorobenzene	1,600 [b]	130 [b]	1	0.07
124-48-1	Chlorodibromomethane	8 [e]	1,300 [d]	0.4	0.02
67-66-3	Chloroform	100 [e]	0.3 [e]	0.6	0.03
95-57-8	2-Chlorophenol	390 [b]	53,000 [d]	4 [b,i]	0.2 [b,f,i]
218-01-9	Chrysene	88 [e]	--- [c]	160 [e]	8 [e]
72-54-8	DDD	3 [e]	--- [c]	16 [e]	0.8 [e]
72-55-9	DDE	2 [e]	--- [c]	54 [e]	3 [e]
50-29-3	DDT	2 [e]	--- [g]	32 [e]	2 [e]
53-70-3	Dibenz(*a,h*)anthracene	0.09 [e,f]	--- [c]	2 [e]	0.08 [e,f]
84-74-2	Di-*n*-butyl phthalate	7,800 [b]	2,300 [d]	2,300 [d]	270 [b]
95-50-1	1,2-Dichlorobenzene	7,000 [b]	560 [d]	17	0.9
106-46-7	1,4-Dichlorobenzene	27 [e]	--- [g]	2	0.1 [f]
91-94-1	3,3-Dichlorobenzidine	1 [e]	--- [c]	0.007 [e,f]	0.0003 [e,f]
75-34-3	1,1-Dichloroethane	7,800 [b]	1,300 [b]	23 [b]	1 [b]
107-06-2	1,2-Dichloroethane	7 [e]	0.4 [e]	0.02	0.001 [f]
75-35-4	1,1-Dichloroethylene	1 [e]	0.07 [e]	0.06	0.003 [f]
156-59-2	*cis*-1,2-Dichloroethylene	780 [b]	1,200 [d]	0.4	0.02
156-60-5	*trans*-1,2-Dichloroethylene	1,600 [b]	3,100 [d]	0.7	0.03
120-83-2	2,4-Dichlorophenol	230 [b]	--- [c]	1 [b,i]	0.05 [b,f,i]

4

Table A-1 (continued)

Organics				Migration to ground water	
CAS No.	Compound	Ingestion (mg/kg)	Inhalation volatiles (mg/kg)	20 DAF (mg/kg)	1 DAF (mg/kg)
78-87-5	1,2-Dichloropropane	9 [e]	15 [b]	0.03	0.001 [f]
542-75-6	1,3-Dichloropropene	4 [e]	0.1 [e]	0.004 [e]	0.0002 [e]
60-57-1	Dieldrin	0.04 [e]	1 [e]	0.004 [e]	0.0002 [e,f]
84-66-2	Diethylphthalate	63,000 [b]	2,000 [d]	470 [b]	23 [b]
105-67-9	2,4-Dimethylphenol	1,600 [b]	--- [c]	9 [b]	0.4 [b]
51-28-5	2,4-Dinitrophenol	160 [b]	--- [c]	0.3 [b,f,i]	0.01 [b,f,i]
121-14-2	2,4-Dinitrotoluene	0.9 [e]	--- [c]	0.0008 [e,f]	4E-05 [e,f]
606-20-2	2,6-Dinitrotoluene	0.9 [e]	--- [c]	0.0007 [e,f]	3E-05 [e,f]
117-84-0	Di-*n*-octyl phthalate	1,600 [b]	10,000 [d]	10,000 [d]	10,000 [d]
115-29-7	Endosulfan	470 [b]	--- [c]	18 [b]	0.9 [b]
72-20-8	Endrin	23 [b]	--- [c]	1	0.05
100-41-4	Ethylbenzene	7,800 [b]	400 [d]	13	0.7
206-44-0	Fluoranthene	3,100 [b]	--- [c]	4,300 [b]	210 [b]
86-73-7	Fluorene	3,100 [b]	--- [c]	560 [b]	28 [b]
76-44-8	Heptachlor	0.1 [e]	0.1 [e]	23	1
1024-57-3	Heptachlor epoxide	0.07 [e]	5 [e]	0.7	0.03
118-74-1	Hexachlorobenzene	0.4 [e]	1 [e]	2	0.1 [f]
87-68-3	Hexachloro-1,3-butadiene	8 [e]	8 [e]	2	0.1 [f]
319-84-6	α-HCH (α-BHC)	0.1 [e]	0.8 [e]	0.0005 [e,f]	3E-05 [e,f]
319-85-7	β-HCH (β-BHC)	0.4 [e]	--- [g]	0.003 [e]	0.0001 [e,f]
58-89-9	γ-HCH (Lindane)	0.5 [e]	--- [c]	0.009	0.0005 [f]
77-47-4	Hexachlorocyclopentadiene	550 [b]	10 [b]	400	20
67-72-1	Hexachloroethane	46 [e]	55 [e]	0.5 [e]	0.02 [e,f]
193-39-5	Indeno(1,2,3-*cd*)pyrene	0.9 [e]	--- [c]	14 [e]	0.7 [e]
78-59-1	Isophorone	670 [e]	4,600 [d]	0.5 [e]	0.03 [e,f]
7439-97-6	Mercury	23 [b,l]	10 [b,i]	2 [i]	0.1 [i]
72-43-5	Methoxychlor	390 [b]	--- [c]	160	8
74-83-9	Methyl bromide	110 [b]	10 [b]	0.2 [b]	0.01 [b,f]
75-09-2	Methylene chloride	85 [e]	13 [e]	0.02 [e]	0.001 [e,f]
95-48-7	2-Methylphenol	3,900 [b]	--- [c]	15 [b]	0.8 [b]
91-20-3	Naphthalene	3,100 [b]	--- [c]	84 [b]	4 [b]
98-95-3	Nitrobenzene	39 [b]	92 [b]	0.1 [b,f]	0.007 [b,f]
86-30-6	*N*-Nitrosodiphenylamine	130 [e]	--- [c]	1 [e]	0.06 [e,f]
621-64-7	*N*-Nitrosodi-*n*-propylamine	0.09 [e,f]	--- [c]	5E-05 [e,f]	2E-06 [e,f]
1336-36-3	PCBs	1 [h]	--- [h]	--- [h]	--- [h]
87-86-5	Pentachlorophenol	3 [e,j]	--- [c]	0.03 [f,i]	0.001 [f,i]
108-95-2	Phenol	47,000 [b]	--- [c]	100 [b]	5 [b]
129-00-0	Pyrene	2,300 [b]	--- [c]	4,200 [b]	210 [b]
100-42-5	Styrene	16,000 [b]	1,500 [d]	4	0.2
79-34-5	1,1,2,2-Tetrachloroethane	3 [e]	0.6 [e]	0.003 [e,f]	0.0002 [e,f]

5

Table A-1 (continued)

Organics				Migration to ground water	
CAS No.	Compound	Ingestion (mg/kg)	Inhalation volatiles (mg/kg)	20 DAF (mg/kg)	1 DAF (mg/kg)
127-18-4	Tetrachloroethylene	12 [e]	11 [e]	0.06	0.003 [f]
108-88-3	Toluene	16,000 [b]	650 [d]	12	0.6
8001-35-2	Toxaphene	0.6 [e]	89 [e]	31	2
120-82-1	1,2,4-Trichlorobenzene	780 [b]	3,200 [d]	5	0.3 [f]
71-55-6	1,1,1-Trichloroethane	— [c]	1,200 [d]	2	0.1
79-00-5	1,1,2-Trichloroethane	11 [e]	1 [e]	0.02	0.0009 [f]
79-01-6	Trichloroethylene	58 [e]	5 [e]	0.06	0.003 [f]
95-95-4	2,4,5-Trichlorophenol	7,800 [b]	— [c]	270 [b,i]	14 [b,i]
88-06-2	2,4,6-Trichlorophenol	58 [e]	200 [e]	0.2 [e,f,i]	0.008 [e,f,i]
108-05-4	Vinyl acetate	78,000 [b]	1,000 [b]	170 [b]	8 [b]
75-01-4	Vinyl chloride	0.3 [e]	0.03 [e]	0.01 [f]	0.0007 [f]
108-38-3	*m*-Xylene	1.6E+05 [b]	420 [d]	210	10
95-47-6	*o*-Xylene	1.6E+05 [b]	410 [d]	190	9
106-42-3	*p*-Xylene	1.6E+05 [b]	460 [d]	200	10

6

Table A-1 (continued)

Inorganics				Migration to ground water	
CAS No.	Compound	Ingestion (mg/kg)	Inhalation fugitive particulate (mg/kg)	20 DAF (mg/kg)	1 DAF (mg/kg)
7440-36-0	Antimony	31 [b]	— [c]	5	0.3
7440-38-2	Arsenic	0.4 [e]	750 [e]	29 [i]	1 [i]
7440-39-3	Barium	5,500 [b]	6.9E+05 [b]	1,600 [i]	82 [i]
7440-41-7	Beryllium	0.1 [e]	1,300 [e]	63 [i]	3 [i]
7440-43-9	Cadmium	78 [b,m]	1,800 [e]	8 [i]	0.4 [i]
7440-47-3	Chromium (total)	390 [b]	270 [e]	38 [i]	2 [i]
16065-83-1	Chromium (III)	78,000 [b]	— [c]	— [g]	— [g]
18540-29-9	Chromium (VI)	390 [b]	270 [e]	38 [i]	2 [i]
57-12-5	Cyanide (amenable)	1,600 [b]	— [c]	40	2
7439-92-1	Lead	400 [k]	— [k]	— [k]	— [k]
7440-02-0	Nickel	1,600 [b]	13,000 [e]	130 [i]	7 [i]
7782-49-2	Selenium	390 [b]	— [c]	5 [i]	0.3 [i]
7440-22-4	Silver	390 [b]	— [c]	34 [b,i]	2 [b,i]
7440-28-0	Thallium	— [c]	— [c]	0.7 [i]	0.04 [i]
7440-62-2	Vanadium	550 [b]	— [c]	6,000 [b]	300 [b]
7440-66-6	Zinc	23,000 [b]	— [c]	12,000 [b,i]	620 [b,i]

DAF = Dilution and attenuation factor.

[a] Screening levels based on human health criteria only.

[b] Calculated values correspond to a noncancer hazard quotient of 1.

[c] No toxicity criteria available for that route of exposure.

[d] Soil saturation concentration (C_{sat}).

[e] Calculated values correspond to a cancer risk level of 1 in 1,000,000.

[f] Level is at or below Contract Laboratory Program required quantitation limit for Regular Analytical Services (RAS).

[g] Chemical-specific properties are such that this pathway is not of concern at any soil contaminant concentration.

[h] A preliminary remediation goal of 1 mg/kg has been set for PCBs based on *Guidance on Remedial Actions for Superfund Sites with PCB Contamination* (U.S. EPA, 1990) and on EPA efforts to manage PCB contamination.

[i] SSL for pH of 6.8.

[j] Ingestion SSL adjusted by a factor of 0.5 to account for dermal exposure.

[k] A screening level of 400 mg/kg has been set for lead based on *Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities* (U.S. EPA, 1994).

[l] SSL is based on RfD for mercuric chloride (CAS No. 007487-94-7).

[m] SSL is based on dietary RfD.

REFERENCE 19

MONTHLY PROGRESS REPORT

METZ METALLURGICAL CORPORATION
SOUTH PLAINFIELD, NEW JERSEY

ECRA CASE #86108

Report No. 03
August 15, 1991

1. PROJECT SCHEDULE

Cleanup operations at Metz Metallurgical Corporation are proceeding on schedule. Details on items completed since submission of Monthly Progress Report No. 02 are discussed in Item 3 below.

One modification has been made to the attached schedule. Soil disposal operations, including ID #27 classification, application for soil reuse as landfill cover, and disposal *per se*, have been moved from Task 4 (Area E, Phase II) to Task 5a (Soil Disposal). The Area E soil will be combined with soil from the perimeter remedial operations (Task 5).

Remedial action on the north perimeter area began on August 13, 1991. Field operations and onsite laboratory analysis are expected to be complete within two weeks. Confirmatory analysis from a New Jersey Certified Laboratory, with Tier II QA/QC is anticipated by mid-September.

2. COSTS INCURRED TO DATE

A detailed accounting of cleanup costs is not available at this time. It is estimated that approximately $134,000 has been expended.

3. WORK COMPLETED TO DATE

The following items have been completed since submission of Monthly Progress Report No. 02:

Area E, Phase II - Remedial activity was completed and confirmed by analysis from a New Jersey Certified Laboratory. A report of the activities with a data summary is attached. The Tier II data package is submitted under separate cover.

South Perimeter (PS-1..PS-3) - Laboratory confirmation was received for the final operations in the vicinity of PS-2. A report of activities with data summary is attached. Tier II data is submitted under separate cover.

North Perimeter (PS-7..PS-10) - Analysis of samples collected for delineation purpose was completed in the onsite laboratory. A detailed discussion of activities on the north perimeter will be submitted when remedial action is complete, and confirmatory analysis with Tier II data is received.

4. PERCENT OF CLEANUP WORK COMPLETED

Approximately 95 percent of the cleanup operation is complete at this time.

5. CLEANUP WORK REMAINING

The following is a summary of the status of remaining areas of concern:

AWT Stockpile - Submission of disposal documentation is required.

Area E - A report of operations and analytic results is attached. Classification and disposal of soil excavated during Phase II operations remains.

South Perimeter (PS-1..PS-3) - A report of operations and analytic results is attached.

North Perimeter (PS-7..PS-10) - Remedial operations are in progress. Remaining activities will include confirmatory analysis, reporting, soil disposal classification and soil disposal.

AREA E PHASE II REMEDIAL PROGRAM
JULY 1991

BACKGROUND

On three occasions, silver chloride was accidentally discharged from the NJPDES-permitted outfall from Metz Metallurgical Corporation (Metz). A detailed account of the spills and the program for contamination delineation was presented in Appendix C of the Report of Analytic Results (CH2M HILL, July 1990). Silver, at concentrations above the ECRA guideline of 5 mg/kg was found in stream sediment from the outfall to the Metz boundary (approximately 300 feet) and from the boundary an additional 570 feet downstream. The stream bed and sediment within this 870 foot section is known as Area E.

The Cleanup Plan for Metz Metallurgical (CH2M HILL, July 1990) included a plan for remediation of the onsite and offsite portions of Area E. Proposed cleanup levels were 100 and 5 mg/kg silver, respectively. Several possible excavation techniques were proposed, including backhoe and manual excavation. It was estimated that approximately 100 cubic yards of sediment would be recovered. Confirmatory samples for silver were initially proposed at an interval of 150 feet. At the request of the NJDEP, the interval was reduced to 30 feet, alternating between stream centerline and bank. In addition, samples EX-1..EX-3, located along the centerline of the onsite portion of Area E, at the ends and the midpoint, were to be collected for petroleum hydrocarbon and volatile organics, as requested by the NJDEP in a letter dated January 20, 1988.

Operations were conducted between 27 November and 4 December, 1990. A backhoe was used to excavate sediment from the stream bed and banks. Temporary diversions of the Metz cooling water were made while work progressed. Post excavation samples were analyzed for silver in the Metz laboratory, and samples splits were collected for subsequent confirmation by a New Jersey Certified Laboratory.

Cleanup levels were not achieved during the November/December operation, despite the fact that approximately 400 cubic yards were excavated. It is likely that the "teeth" on the backhoe bucket mixed the sediment as it was being excavated. Since the onsite laboratory results showed that the operation was not complete, the sample splits were not sent to the offsite laboratory. The excavated soil occupied all the room available for soil stockpiling. Therefore, no additional work could be performed until the soil was classified and disposed of offsite.

A Phase II operation for Area E, proposed with cleanup plan revisions on March 27, 1991, was approved by NJDEP on April 26, 1991. Approved cleanup levels for onsite and offsite areas for silver were 200 and 5 mg/kg respectively.

p.3

OPERATIONS

Phase II of the stream cleanup began on June 17, 1991 and continued through July 2, 1991. Based on analytical results from the Phase I operations, onsite remediation was required at locations 0, 120, and 240 only, as measured from the NJPDES outfall (Figure 1). The offsite portion (from 300 to 900) required remedial work along the entire length of the stream.

The initial step in the cleanup was to prepare a storage area for the excavated sediment. The storage area was set up in the western most section of the Metz parking lot. Heavy plastic (6 mil) was spread out on the parking lot and anchored with hay bales.

ONSITE REMEDIATION

The onsite swale starts at the original NJPDES outfall (station 0) and continues 300 feet to the eastern edge of the property. Sample station 300 is located offsite, directly downstream of the fence marking the property line.

The swale cleanup began at station 120 using a Case backhoe with a 2 foot wide bucket. Excavation was conducted to remove approximately 12 inches of sediment/soil from both banks and the swale bottom. The excavated area extended away from station 120 for approximately 5 feet in each direction. The excavated sediment was loaded into a lined dump truck and transported to the onsite storage area.

During excavation at station 120, the construction crew formed a temporary dam with hay bales and plastic at station 245. The water was then pumped from the swale and allowed to drain downstream of the dam. This method of pumping the water around the remediation location was conducted throughout the cleanup. In addition, silt fences were constructed at various locations starting at 300 to reduce the quantity of sediments transported downstream during excavation.

Remediation was conducted in a similar manner at stations 0 and 240. Upon completion of the excavation at each location, samples were collected from the centerline and the left and right banks at the high water mark. These samples were sent to the Metz laboratory to determine if further excavation was required. In addition, samples were collected from locations 30-R, 60-C, and 90-L to confirm the initial finding that the NJDEP cleanup level of 200 ppm had been achieved in the onsite swale. The samples were collected by scooping the sediment from the backhoe bucket with a wooden tongue depressor and placing it into 8 ounce, laboratory cleaned, glass jars. Care was taken not to collect sediment that had contacted the backhoe bucket.

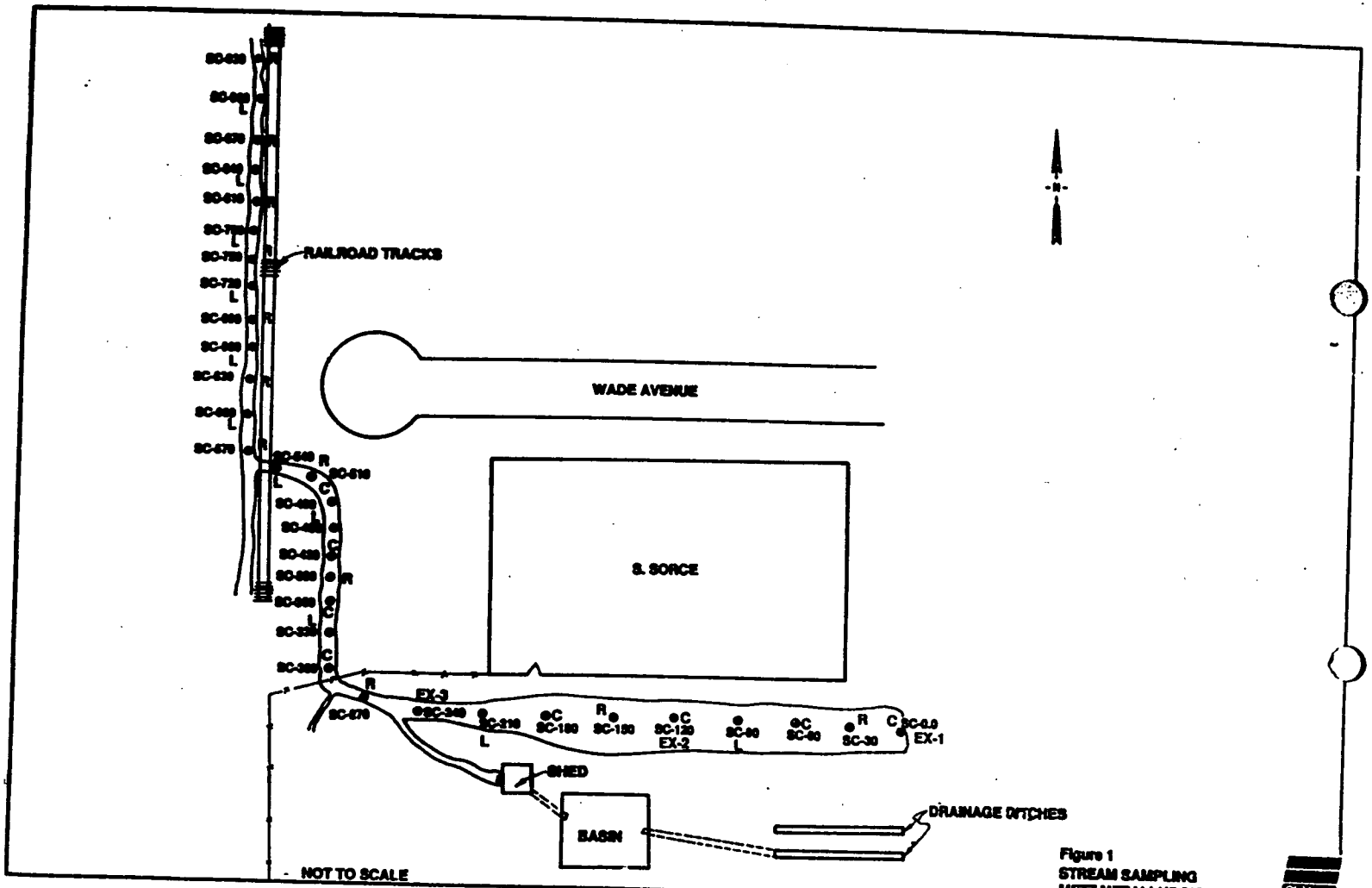

Figure 1
STREAM SAMPLING
METZ METALLURGICAL CORP.

P.5

After onsite analysis showed that the 200 mg/kg onsite cleanup level had been achieved, confirmatory samples were taken at 30 foot intervals in a center, left, center, right pattern using the same manner as before. These samples were packed on ice and delivered to Accutest Laboratory for analysis upon completion of the stream cleanup.

Samples EX-1, EX-2, and EX-3 were collected from stations 0, 120, and 240, respectively. These samples were sent to Accutest immediately for total petroleum hydrocarbon (PHC) and volatile organics analysis (VOA).

OFFSITE REMEDIATION

Offsite remediation was conducted in two phases, using different remediation methods. Manual remediation was attempted in the portion of the stream from 300 to 540, but the method was abandoned due to the very slow progress through the approximately 1 foot thick mud. A backhoe was used to complete the operation within the zone.

Approximately 6 to 8 inches of sediment were removed from the stream and placed into the lined dump truck. Two laborers followed behind the backhoe bucket with shovels and rakes, keeping the bed clean and the banks even. Approximately 10 cubic yards of sediment were collected from this portion of the stream and stockpiled onsite to await proper disposal.

Samples were taken at 30 foot intervals in the same manner as the onsite swale samples. Every sample was split into two separate glass jars, one going to the Metz laboratory for analysis and one being held by CH2M HILL pending the Metz results. The analytical results from Metz's laboratory indicated silver concentrations of <5 ppm for every sample between 300 and 540. The split samples for this portion of the stream were then forwarded to Accutest for analysis.

Remediation of the stream bed was conducted manually downstream of station 540. This portion of the stream has characteristically steep, overgrown banks, and exposed bedrock in the middle of the stream. Approximately 6 inches of sediment and soil from the sides of the stream bed and the bank walls was removed using shovels. The excavated material was placed into 5-gallon pails and transported into the plastic lined, front bucket of the backhoe. When the bucket was filled, the soil was placed into the plastic lined dump truck.

Samples were collected in an alternating left, right pattern downstream of 540, where bedrock was exposed in the center of the stream bed. Each sample was split into two glass jars in the same manner as described above. If analytical results from Metz's laboratory indicated a silver concentration above 5 ppm,, additional remediation was conducted along both banks of the stream upstream and downstream from that location. A new sample was then collected, split, and forwarded to Metz for analysis. If necessary, the process was repeated a third time. All samples indicated clean closure within three repetitions.

Although the original delineation of the silver contamination indicated no impact downstream of station 870, elevated silver concentrations were detected at station 900 during the first phase of the stream cleanup. These elevated levels are probably attributable to sediment migration. To minimize the chance for additional migration of silver, silt fences were constructed at frequent intervals along the stream bed, generally 30 to 50 feet apart. A sample was collected from the undisturbed stream bank at location 930 to assess whether silver had migrated past 900.
Analytical results from the Metz laboratory indicated clean closure for the entire length of the stream bed. Confirmation from Accutest laboratory concurred with the exception of sample SC-570-R, which had a silver concentration of 24 mg/kg. Additional manual excavation was conducted at this segment on July 22, 1991, and a second confirmatory sample was collected.

RESULTS

Sample analysis was performed at Accutest Laboratory, Dayton, New Jersey (Certification Number 12129). Analytic results are summarized in Table 1. Laboratory reports, complete with Tier II deliverables, are submitted under separate cover.

All samples, including the onsite portion of Area E, were cleaned to below the offsite cleanup level of 5 mg/kg. No petroleum hydrocarbons were detected at a limit of 25 mg/kg. The only volatile compound detected was methylene chloride, at insignificant levels. Methylene chloride is a common laboratory contaminant.

The results presented above document that the Area E remediation was successfully completed.

Table 1
Metz Metallurgical Corporation
Summary of Area Confirmatory Analysis

Station/sample		Silver (mg/kg)	PHC (mg/kg) ppm	VOC (target) (ug/kg) ppb	VOC (TIC)
0	C	<3.0			
	EX-1		<25	ND	ND
30	R	<3.0			
60	C	<3.0			
90	L	<3.0			
120	C	<3.0			
	EX-2		<25	10 below CUS (Methylene chloride)	ND
150	R	4.1			
180	C	<3.0			
210	L	<3.0			
240	C	<3.0			
	EX-3		<25	7 below CUS & 10 ppb (Methylene chloride)	ND
270	R	<3.0			
300	C	<3.0			
330	L	<3.0			
360	C	<3.0			
420	C	<3.0			
450	L	<3.0			
480	C	<3.0			
510	R	<3.0			
540	L	<3.0			
570	R	24.0			
		<3.0	below CUS (Sample collected following additional remedial action on 7/22/91)		
600	L	<3.0			
630	R	<3.0			
660	L	<3.0			
690	R	<3.0			
720	L	<3.0			
750	R	<3.0			
780	L	<3.0			
810	R	<3.0			
840	L	<3.0			
870	R	<3.0			
900	L	<3.0			
930	R	<3.0			

SOUTH PERIMETER REMEDIATION
MAY - JULY 1991

BACKGROUND

As part of the ECRA sample program at Metz Metallurgical Corporation (Metz), samples were collected from the site perimeter. Results of the sampling were reported in the Report of Analytic Results (CH2M HILL, July 1990). Silver concentrations exceeded the ECRA guideline concentration of 5 mg/kg in three locations along the south perimeter (PS-1..PS-3, as shown on Figure 1). In addition, cadmium exceeded the ECRA guideline of 3 mg/kg at PS-3. The Cleanup Plan for Metz Metallurgical (CH2M HILL, July, 1990) presented a plan for remediation of these locations, and PS-5, which also contained silver above the ECRA guideline.

In the Cleanup Plan approval (NJDEP letter dated April 26, 1991), it was stated that onsite perimeter samples (including PS-5) would not require remediation. Since PS-1, PS-2 and PS-3 were located immediately adjacent to the site boundary, Metz elected to remediate these areas to the offsite cleanup levels for silver and cadmium of 5 and 3 mg/kg respectively.

OPERATIONS

Field operations were initially conducted between May 22 and May 24, 1991. Excavation was conducted manually around PS-1 and PS-2. Since greater access was available at PS-3, a backhoe was used at this location. At each site, the initial excavation was centered around the original sample location. Samples were collected from the bottom center of each excavation and from the sidewalls at the outside corners. The latter samples were collected from grade to 0.5-feet. These samples were analyzed in the Metz laboratory for silver and cadmium as required. Additional soil was excavated based on the Metz laboratory results until cleanup levels were achieved. Approximate dimensions (in feet) were:

Location	Length	Width	Depth
PS-1	2	1	2
PS-2	2	1	2
PS-3	4	4	2

Sample splits were shipped to Accutest Laboratory for confirmatory analysis. These results, which are presented below, demonstrated that remediation was complete in PS-1 and PS-3, but not complete in PS-2. Additional excavation was conducted at this

location on 21 June and again on 24 June, 1991, until the Metz laboratory showed results below the cleanup level. Approximately 1 foot of additional length, width and depth was removed. Sample splits from the 24 June operation were shipped to Accutest for confirmation.

RESULTS

Sample analysis was performed at Accutest Laboratory, Dayton, New Jersey (Certification Number 12129). Analytic results are summarized below. Laboratory reports, complete with Tier II deliverables, are submitted under separate cover.

Sample/location	Depth (feet)	Date	Silver (mg/kg)	Cadmium (mg/kg)
PS-1A/left edge	0-0.5	5/22/91	<3.0	NA
PS-1B/center	2-2.5	5/22/91	<3.0	NA
PS-1C/right edge	0-0.5	5/22/91	<3.0	NA
PS-2A/left edge	0-0.5	5/24/91	6.6	NA
PS-2B/center	2-2.5	5/24/91	27.0	NA
PS-2C/right edge	0-0.5	5/24/91	4.3	NA
PS-2A/left edge	0-0.5	6/24/91	<3.0	NA
PS-2/center	3-3.5	6/24/91	<3.0	NA
PS-2B/right edge	0-0.5	6/24/91	<3.0	NA
PS-3A/left edge	0-0.5	5/22/91	<3.0	<1.0
PS-3B/center	2-2.5	5/22/91	<3.0	<1.0
PS-3C/right edge	0-0.5	5/22/91	<3.0	<1.0

Analytic results from all the final samples collected at the three locations were below the offsite cleanup levels for silver and cadmium. These results document that the south perimeter remediation was successfully completed.

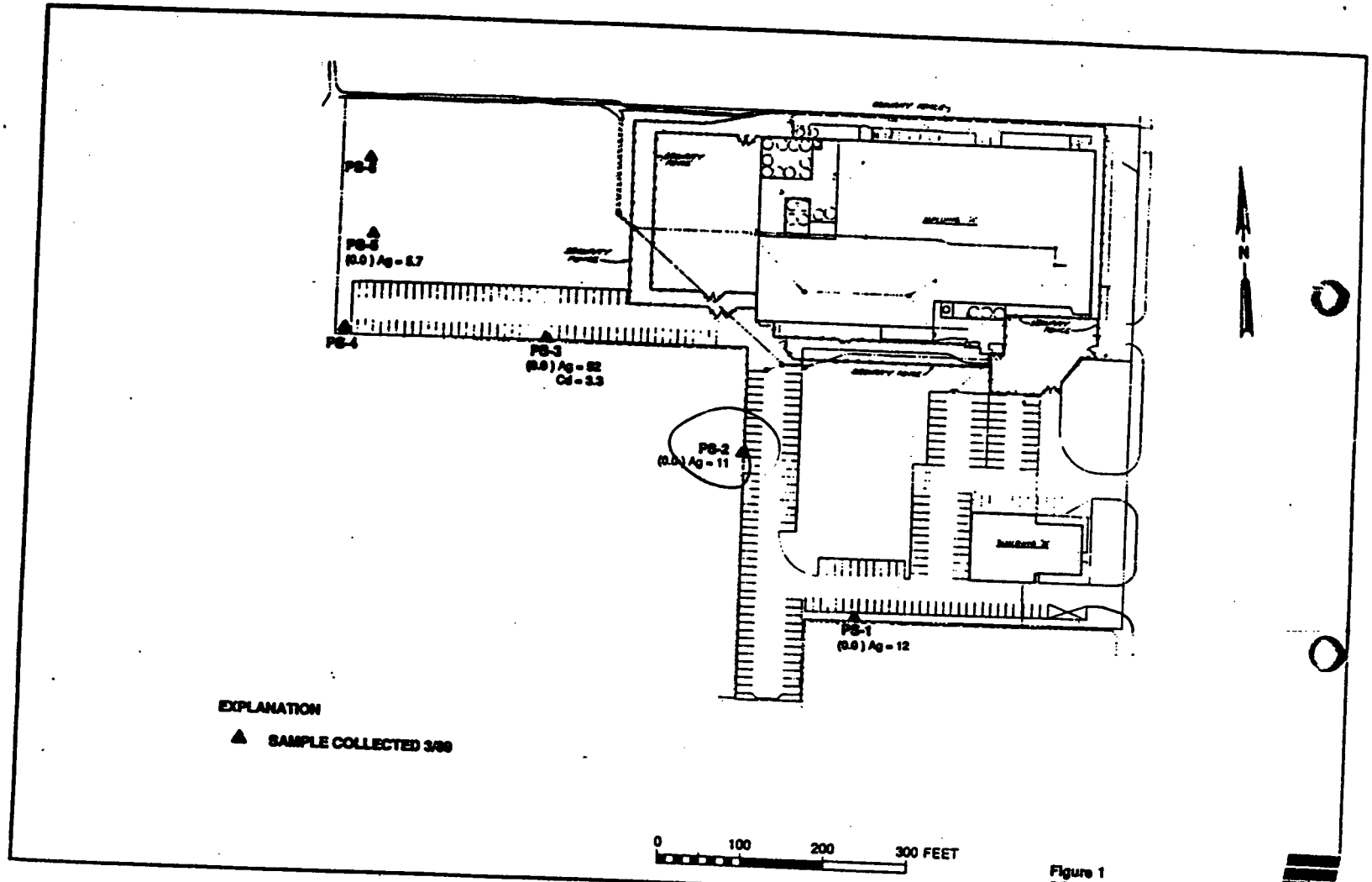

Figure 1
PERIMETER SAMPLE LOCATIONS

REFERENCE 20

The EDR-Radius Map
with GeoCheck®

Metz Metallurgical Corp
3900 S Clinton Ave
South Plainfield, NJ 07080

Inquiry Number: 1441071.1p

December 07, 1999

Environmental Data Resources, Inc.
an edr company

The Source For Environmental Risk Management Data

3530 Post Road
Southport, Connecticut 06490

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Topographic Map	2
GeoCheck Summary	3
Overview Map	6
Detail Map	7
Map Summary - All Sites	8
Map Summary - Sites with higher or the same elevation as the Target Property	9
Map Findings	10
Orphan Summary	113

APPENDICES

GeoCheck Version 2.1	A1
EPA Waste Codes	A5
Government Records Searched / Data Currency Tracking Addendum	A6

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-97. Search distances are per ASTM standard or custom distances requested by the user.

The address of the subject property for which the search was intended is:

3900 S CLINTON AVE
SOUTH PLAINFIELD, NJ 07080

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the subject property or within the ASTM E 1527-97 search radius around the subject property for the following Databases:

Delisted NPL:_____ NPL Deletions
SWF/LF:_____ Solid Waste Facility Directory
RAATS:_____ RCRA Administrative Action Tracking System
HMIRS:_____ Hazardous Materials Information Reporting System
NJ PF:_____ Publicly Funded Cleanups Site Status Report
CHROME:_____ Known Chromate Chemical Production Waste Sites
PADS:_____ PCB Activity Database System
NPL Lien:_____ NPL Liens
TSCA:_____ Toxic Substances Control Act
Coal Gas:_____ Former Manufactured gas (Coal Gas) Sites.

Unmapped (orphan) sites are not considered in the foregoing analysis.

Search Results:

Search results for the subject property and the search radius, are listed below:

Subject Property:

The subject property was identified in the following government records. For more information on this property see page 10 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
DEGUSSA CORPORATION - METAL GROUP 3900 S CLINTON AVE SOUTH PLAINFIELD, NJ 70800	Maj Facilities	N/A
METALERTICAL 3900 S CLINTON AVE SOUTH PLAINFIELD, NJ	NJ Spills	N/A
DEGUSSA CORP 3900 S CLINTON AVE SOUTH PLAINFIELD, NJ	NJ Release	N/A
3900 S CLINTON AVE 3900 S CLINTON AVE SOUTH PLAINFIELD, NJ	ERNS	N/A

EXECUTIVE SUMMARY

DEGUSSA CORP METAL GROUP 3900 S CLINTON AVE SOUTH PLAINFIELD, NJ 07080	CERCLIS FINDS RCRIS-LQG TRIS RCRIS-TSD MLTS CORRACTS UST NJ Release	NJD002195303
DEGUSSA 3900 S CLINTON AVE SOUTH PLAINFIELD, NJ	NJ Release	N/A
3900 SOUTH CLINTON AVE METZ PLANT 3900 SOUTH CLINTON AVE METZ PLANT SOUTH PLAINFIELD, NJ	ERNS	N/A

Surrounding Properties:

Elevations have been determined from the USGS 1 degree Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. EDR's definition of a site with an elevation equal to the subject property includes a tolerance of -10 feet. Sites with an elevation equal to or higher than the subject property have been differentiated below from sites with an elevation lower than the subject property (by more than 10 feet). Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

NPL: Also known as Superfund, the National Priority List database is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund program. The source of this database is the U.S. EPA.

A review of the NPL list, as provided by EDR, and dated 07/22/1999 has revealed that there is 1 NPL site within approximately 1 mile of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
CHEMSOL INC SITE - USEPA	***FOOT OF FLEMING ST***	***1/2 - 1 W***	***0***	***33***

RCRIS: The Resource Conservation and Recovery Act database includes selected information on sites that generate, store, treat, or dispose of hazardous waste as defined by the Act. The source of this database is the U.S. EPA.

A review of the RCRIS-TSD list, as provided by EDR, and dated 09/01/1999 has revealed that there is 1 RCRIS-TSD site within approximately 0.5 miles of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
SAFETY KLEEN CORP SOUTH PLAINF	***SKYLINE DR***	***1/8 - 1/4 ENE***	***H31***	***52***

SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Environmental Protection & Energy's Site Status Report.

A review of the SHWS list, as provided by EDR, has revealed that there are 34 SHWS sites within approximately 1 mile of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
4201 CLINTON AVENUE SOUTH	4201 CLINTON AVE S	1/8 - 1/4 SSE	D20	44
L & R METAL TREATING COMPANY	3651 CLINTON AVE	1/8 - 1/4 N	21	45
PLATINA REFINING LABORATORIES	***4301 S CLINTON AVE***	***1/8 - 1/4 SSE***	***G27***	***50***
THERMA PLATE CORP	***111 SKYLINE DR***	***1/8 - 1/4 ENE***	***H29***	***51***
TEVCO, INC.	***690 MONTROSE AVE***	***1/4 - 1/2 ENE***	***37***	***56***
ARKO PAPER PRODUCTS CO INC	***4100 NEW BRUNSWICK AVE***	***1/4 - 1/2 WSW***	***38***	***57***
SNYDER FOUNDATION INC	***4201 KENNEDY RD***	***1/4 - 1/2 ESE***	***J39***	***59***
CONTI ENTERPRISES INC	***200 ST NICHOLAS AVE***	***1/4 - 1/2 ESE***	***J41***	***61***
FEDERAL INTERNAT'L CHEMICALS	***3474 RAND ROAD***	***1/4 - 1/2 NNW***	***44***	***65***
PROSOCO INC PLT	***111 SNYDER RD***	***1/4 - 1/2 ENE***	***45***	***68***
6 JOYCE DRIVE	6 JOYCE DR	1/4 - 1/2 W	46	72

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
BINDER MACHINERY CO	*2820 HAMILTON BLVD*	*1/4 - 1/2 SE*	*47*	*72*
ABSOLUTE FIRE PROTECTION CO IN	*2800 HAMILTON BLVD*	*1/4 - 1/2 SE*	*K48*	*75*
MARY KAY COSMETICS	*3100 HAMILTON BLVD*	*1/4 - 1/2 S*	*M57*	*82*
LEND LEASE TRUCKS INCORPORATED	4305 NEW BRUNSWICK AVE	1/2 - 1 SW	58	85
SILVERLINE BUILDING CORPORATIO	105 TO 109 SYLVANIA PL	1/2 - 1 N	59	86
SHELL SERVICE STATION	*780 STELTON RD*	*1/2 - 1 SW*	*60*	*86*
BORO AUTO WRECKERS	*2271 HAMILTON BLVD*	*1/2 - 1 E*	*62*	*91*
SHELL SERVICE STATION	*1649 STELTON RD*	*1/2 - 1 SSW*	*63*	*92*
SUN BELT PARTNERS INC	*571 STELTON RD*	*1/2 - 1 WSW*	*64*	*95*
LYNN STEEL CORP	*235 ST NICHOLAS AVE*	*1/2 - 1 ESE*	*65*	*97*
EXXON SERVICE STATION PISCATAW	1000 STELTON RD	1/2 - 1 SSW	66	98
SUNOCO	*1028 STELTON RD*	*1/2 - 1 S*	*71*	*102*
V TUFARO & SONS INC	*225 DURHAM AVE*	*1/2 - 1 SE*	*72*	*105*
COLORFUL STORYBOOKS	*2 HOLLYWOOD CT*	*1/2 - 1 ESE*	*73*	*106*
TEXACO STATION	*450 STELTON RD*	*1/2 - 1 WSW*	*74*	*107*

Lower Elevation	Address	Dist / Dir	Map ID	Page
AMERICAN STEEL ERECTURS INC	*1501 JERSEY ST*	*1/2 - 1 N*	*61*	*90*
BARCLAY BRAND CORP	*2401 S CLINTON AVE*	*1/2 - 1 N*	*N67*	*99*
ECO PUMP CORPORATION	2387 CLINTON AVE	1/2 - 1 N	N68	100
JONATHAN PROPERTIES	*2364 S CLINTON AVE*	*1/2 - 1 N*	*N69*	*100*
CF MOTOR FREIGHT	105 NEW ERA DR	1/2 - 1 N	70	102
LOOSE LEAF INDUSTRIES INCORPOR	2101 PARKER AVE	1/2 - 1 N	75	109
JOE NICASTRO'S GARAGE	*720 HAMILTON BLVD*	*1/2 - 1 NE*	*O76*	*109*
BP SERVICE STATION SOUTH PLAIN	700 HAMILTON BLVD	1/2 - 1 NE	O77	111

CERCLIS: The Comprehensive Environmental Response, Compensation and Liability Information System contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).
CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the CERCLIS list, as provided by EDR, and dated 08/26/1999 has revealed that there are 2 CERCLIS sites within approximately 0.5 miles of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
FERRO CORPORATION	*115 SKYLINE DRIVE*	*1/8 - 1/4 ENE*	*26*	*47*
VICTAULIC COMPANY OF AMERICA	*3100 HAMILTON BOULEVARD*	*1/4 - 1/2 S*	*M56*	*81*

CERCLIS-NFRAP: As of February 1995. CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund Action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

A review of the CERC-NFRAP list, as provided by EDR, and dated 08/26/1999 has revealed that there are 3 CERC-NFRAP sites within approximately 0.25 miles of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
THERMO NATIONAL INDUSTRIAL INC	***3651 SOUTH CLINTON AVE***	***0 - 1/8 NNE***	***B8***	***36***
PLATINA REFINING LABORATORIES	***4301 S CLINTON AVE***	***1/8 - 1/4 SSE***	***G27***	***50***
BH&P INC. (AKA ECONOMICS LABOR	800 MONTROSE AVENUE	1/8 - 1/4 ENE	I34	55

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 03/01/1999 has revealed that there is 1 CORRACTS site within approximately 1 mile of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
SAFETY KLEEN CORP SOUTH PLAINF	***SKYLINE DR***	***1/8 - 1/4 ENE***	***H31***	***52***

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Environmental Protection & Energy's Incident Report.

A review of the LUST list, as provided by EDR, and dated 09/29/1999 has revealed that there are 9 LUST sites within approximately 0.5 miles of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
J & H BERGE INC	4111 SOUTH CLINTON AVEN	0 - 1/8 SSE	C9	37
4201 CLINTON AVENUE SOUTH; CON	4201 S CLINTON AVE	1/8 - 1/4 SSE	D16	41
EASTERN STEEL BARREL CORP	4100 N BRUNSWICK AVE	1/4 - 1/2 WSW	36	56
SNYDER FOUNDATION INCORPORATED	4201 KENNEDY RD	1/4 - 1/2 ESE	J40	61
CONTI ENTERPRISES INC	200 SAINT NICHOLAS AVE	1/4 - 1/2 ESE	42	63
SYNERGY GAS CORP	***4700 S CLINTON AVE***	***1/4 - 1/2 SSE***	***43***	***64***
ABSOLUTE FIRE PROTECTION CO IN	***2800 HAMILTON BLVD***	***1/4 - 1/2 SE***	***K48***	***75***
ABSOLUTE FIRE PROTECTION COMPA	2800 HAMILTON BLVD	1/4 - 1/2 SE	K49	78
HOME DEPOT MAY KAY COSMETICS	3100 HAMILTON BLVD	1/4 - 1/2 S	M55	81

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Protection & Energy's UST Data.

A review of the UST list, as provided by EDR, and dated 09/15/1999 has revealed that there are 6 UST sites within approximately 0.25 miles of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
J & H BEREE INC	4111 S CLINTON AVE	0 - 1/8 SSE	C10	37
DM CONNOR & CO	4201 S CLINTON AVE	0 - 1/8 SE	C11	38
MITSUBISHI INTERNATIONAL WAREH	100 WADE AVE	0 - 1/8 NNE	B13	39
JESCO INC	***118 ST NICHOLAS AVE***	***1/8 - 1/4 SE***	***E19***	***42***
MCGRATH EQUIPMENT CO.	***70 TYLER PLACE***	***1/8 - 1/4 S***	***24***	***46***
EASTERN RAILROAD EQUIPMENT COR	4400 S CLINTON AVE	1/8 - 1/4 SSE	32	53

EXECUTIVE SUMMARY

RCRIS: The Resource Conservation and Recovery Act database includes selected information on sites that generate, store, treat, or dispose of hazardous waste as defined by the Act. The source of this database is the U.S. EPA.

A review of the RCRIS-SQG list, as provided by EDR, and dated 09/01/1999 has revealed that there are 8 RCRIS-SQG sites within approximately 0.25 miles of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
WARNER JENKINSON COSMETIC COLO	*107 WADE AVE*	*0 - 1/8 N*	*B12*	*39*
TRANS AMERICAN TRUCKING SVC IN	*115 ST NICHOLAS AVE*	*1/8 - 1/4 SE*	*E17*	*41*
A J JERSEY INC	*125 ST NICHOLAS AVE*	*1/8 - 1/4 SE*	*E18*	*42*
J ALGOT JOHNSON	*88 TYLER PL*	*1/8 - 1/4 S*	*F22*	*45*
MCGRATH EQUIPMENT CO.	*70 TYLER PLACE*	*1/8 - 1/4 S*	*24*	*46*
FERRO CORPORATION	*115 SKYLINE DRIVE*	*1/8 - 1/4 ENE*	*26*	*47*
THERMA PLATE CORP	*111 SKYLINE DR*	*1/8 - 1/4 ENE*	*H29*	*51*
N B S CARD SERVICES INC	*800 MONTROSE AVE*	*1/8 - 1/4 ENE*	*I33*	*54*

RCRIS: The Resource Conservation and Recovery Act database includes selected information on sites that generate, store, treat, or dispose of hazardous waste as defined by the Act. The source of this database is the U.S. EPA.

A review of the RCRIS-LQG list, as provided by EDR, and dated 09/01/1999 has revealed that there are 10 RCRIS-LQG sites within approximately 0.25 miles of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
THERMO NATIONAL INDUSTRIAL INC	*3651 SOUTH CLINTON AVE*	*0 - 1/8 NNE*	*B8*	*36*
ROLLER CORP OF AMERICA	*3601 S CLINTON AVE*	*0 - 1/8 NNE*	*B14*	*40*
DEGUSSA CORP METAL GROUP	*3601 S CLINTON AVE*	*0 - 1/8 NNE*	*B15*	*40*
JESCO INC	*118 ST NICHOLAS AVE*	*1/8 - 1/4 SE*	*E19*	*42*
ULTRAKLEEN CO	*88 TYLER PL*	*1/8 - 1/4 S*	*F23*	*45*
PLATINA REFINING LABORATORIES	*4301 S CLINTON AVE*	*1/8 - 1/4 SSE*	*G27*	*50*
ZERO HOUR CORP THE	*4300 S CLINTON AVE*	*1/8 - 1/4 SSE*	*G28*	*51*
P K MEILKE INC	*105 TYLER PL*	*1/8 - 1/4 SSE*	*G30*	*52*
SAFETY KLEEN CORP SOUTH PLAINF	*SKYLINE DR*	*1/8 - 1/4 ENE*	*H31*	*52*
ECONOMICS LABORATORY INC	*800 MONTROSE AVE*	*1/8 - 1/4 ENE*	*I35*	*55*

NJ Maj Facilities: 'Major Facility' means all facilities, located on one or more contiguous or adjacent properties owned or operated by the same person, having total combined storage capacity of: 1) 20,000 gallons or more for hazardous substances other than Petroleum or petroleum products; 2) 200,000 gallons or more for hazardous substances of all kinds.

A review of the Maj Facilities list, as provided by EDR, has revealed that there are 5 Maj Facilities sites within approximately 0.5 miles of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
TEVCO, INC.	110 POMPONIO AVE	1/4 - 1/2 NE	50	79
VANGUARD RESEARCH INDUSTRIES,	239 SAINT NICHOLAS AVE	1/4 - 1/2 E	L51	80
VANGUARD RESEARCH INDUSTRIES,	239 SAINT NICHOLAS AVE	1/4 - 1/2 E	L52	80
VANGUARD RESEARCH INDUSTRIES,	239 SAINT NICHOLAS AVE	1/4 - 1/2 E	L53	80
VANGUARD RESEARCH INDUSTRIES,	239 SAINT NICHOLAS AVE	1/4 - 1/2 E	L54	81

EXECUTIVE SUMMARY

RODS: Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid the cleanup.

A review of the ROD list, as provided by EDR, has revealed that there is 1 ROD site within approximately 1 mile of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
CHEMSOL INC SITE - USEPA	*FOOT OF FLEMING ST*	*1/2 - 1 W*	*0*	*33*

CONSENT: Major Legal settlements that establish responsibility and standards for cleanup at NPL (superfund) sites. Released periodically by U.S. District Courts after settlement by parties to litigation matters.

A review of the CONSENT list, as provided by EDR, and dated Varies has revealed that there is 1 CONSENT site within approximately 1 mile of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
CHEMSOL INC SITE - USEPA	*FOOT OF FLEMING ST*	*1/2 - 1 W*	*0*	*33*

Mines: Mines Master Index File. The source of this database is the Dept. of Labor, Mine Safety and Health Administration.

A review of the MINES list, as provided by EDR, and dated 08/01/1998 has revealed that there is 1 MINES site within approximately 0.25 miles of the subject property.

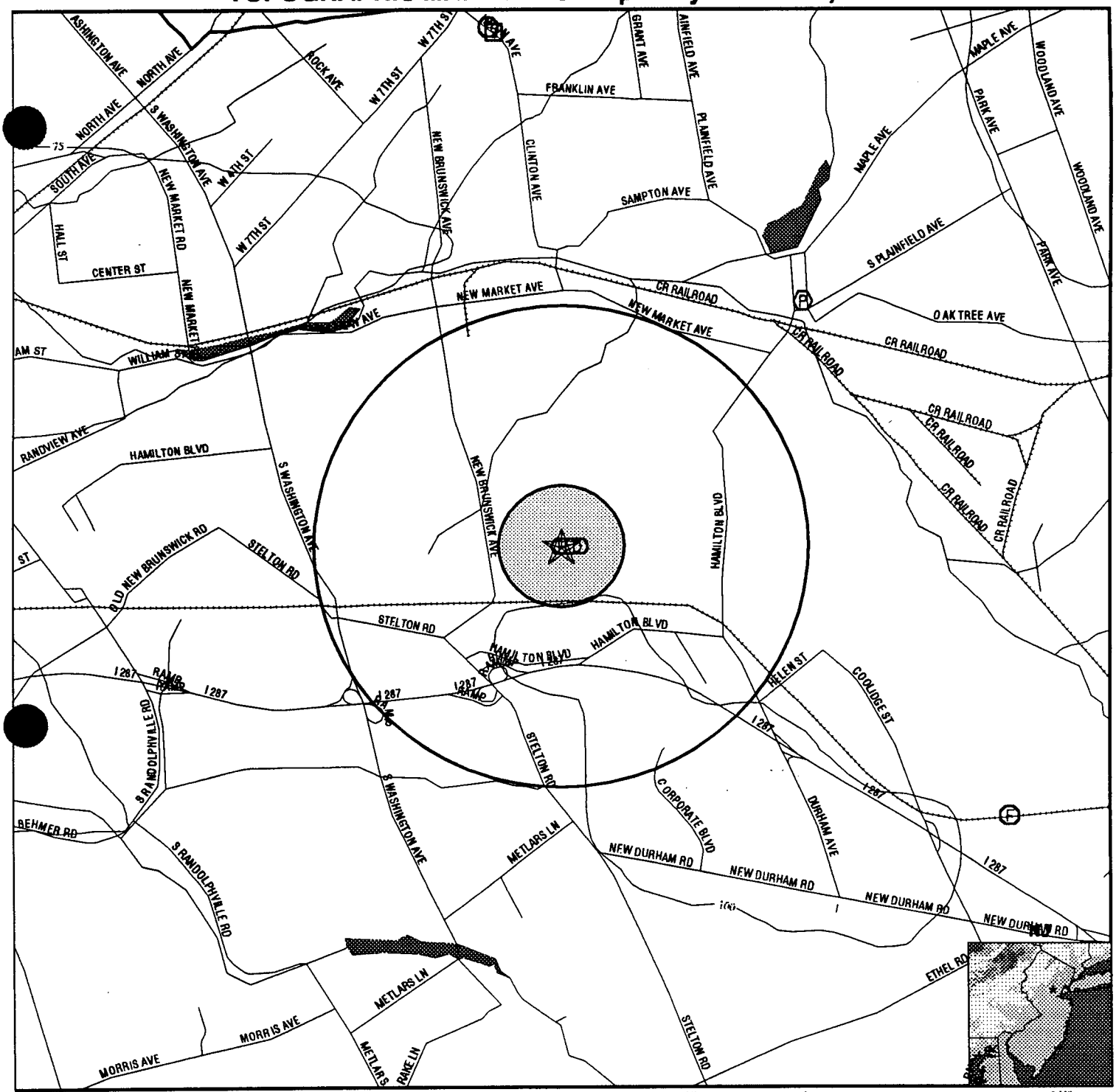
Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
BYRAM CRUSHED STONE CORPO		1/8 - 1/4 S	F25	47

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
CHEMSOL INC	FINDS,RCRIS-LQG,SHWS
154 ELLIOT PLACE	SHWS
PITT STREET GROUND WATER CONTAMINATION	SHWS,NJ PF
FLAGSHIP CLEANING SERVICES INC	UST,SHWS
SPRING LAKE PCB CONTAMINATION	CERCLIS
SOUTH PLAINFIELD ASBESTOS DUMP	CERC-NFRAP
SOUTH PLAINFIELD TS/ MRF	SWF/LF
V TUFARO & SON RECYC	SWF/LF
SOUTH PLAINFIELD BORO SLF	SWF/LF
FLAGSHIP CLEANING SERVICES	LUST
KENTILE FLOORS INC S PLAINFIELD PLT	FINDS,RCRIS-LQG,MLTS UST,NJ Spills,NJ Release
GETTY PIPE CO SO PLAINFIELD TE	FINDS,RCRIS-LQG
GETTY PIPE CO	FINDS,RCRIS-LQG
MEDTECH PLASTICS CO	FINDS,RCRIS-LQG
SOUTH CLINTON METALS	RCRIS-LQG
DE GUSSA- METZ	NJ Spills,NJ Release
DEGUSSA / METZ	NJ Release

TOPOGRAPHIC MAP - 1441071.1p - Roy F. Weston, Inc.



- Major Roads
- Contour Lines
- Waterways
- Earthquake epicenter, Richter 5 or greater
- Closest Federal Well in quadrant
- Closest State Well in quadrant
- Closest Public Water Supply Well

0 1/2 1 2 Miles

HD Closest Hydrogeological Data

TARGET PROPERTY:	Metz Metallurgical Corp	CUSTOMER:	Roy F. Weston, Inc.
ADDRESS:	3900 S Clinton Ave	CONTACT:	Ms Kierston Dorneman
CITY/STATE/ZIP:	South Plainfield NJ 07080	INQUIRY #:	1441071.1p
LAT/LONG:	40.5644 / 74.4302	DATE:	December 07, 1999 1:51 pm

GEOCHECK VERSION 2.1
SUMMARY

TARGET PROPERTY COORDINATES

Latitude (North):	40.564442 - 40' 33' 52.0"
Longitude (West):	74.430229 - 74' 25' 48.8"
Universal Transverse Mercator:	Zone 18
UTM X (Meters):	548234.0
UTM Y (Meters):	4490352.5
State Plane X (Feet):	2065692.4
State Plane Y (Feet):	630646.2

USGS TOPOGRAPHIC MAP ASSOCIATED WITH THIS SITE

Target Property:	2440074-E4 PLAINFIELD, NJ

GEOLOGIC AGE IDENTIFICATION†

Geologic Code:	Tr
Era:	Mesozoic
System:	Triassic
Series:	Triassic

ROCK STRATIGRAPHIC UNIT†

Category:	Stratified Sequence

GROUNDWATER FLOW INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, including well data collected on nearby properties, regional groundwater flow information (from deep aquifers), or surface topography.‡

AQUIFLOW™** Search Radius: 2.000 Miles. The following table shows sites where groundwater flow and depth information was reported. Additional AQUIFLOW™ site information may be available in the GeoCheck® section at the end of this report.

MAP ID	DISTANCE FROM TP	DIRECTION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported			

General Topographic Gradient at Target Property: General North
General Hydrogeologic Gradient at Target Property: No hydrogeologic data available.

† Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).
‡ U.S. EPA Ground Water Handbook, Vol I: Ground Water and Contamination, Office of Research and development EPA/625/6-90/016a,Chapter 4, page 78, September 1990.
** EDR AQUIFLOW™ Information System of hydrogeologically determined groundwater flow directions at specific locations. See the date pages at the end of this report for a complete description.

GEOCHECK VERSION 2.1
SUMMARY

Site-Specific Hydrogeological Data*:

Search Radius:	2.0 miles
Location Relative to TP:	0 - 1/8 Mile East
Site Name:	Metz Metallurgical Corp.
Site EPA ID Number:	NJD002195303
Groundwater Flow Direction:	S BUT GROUND WATER FLOW DIRECTION IS CONTROLLED ON SITE BY THE FACILITY PRODUCTION WELL.
Measured Depth to Water:	25 feet to 32 feet.
Hydraulic Connection:	The Brunswick Formation bedrock is the surficial aquifer at the site and ground water is present in this aquifer under water table conditions.
Sole Source Aquifer:	No information about a sole source aquifer is available
Data Quality:	Information based on site-specific subsurface investigations is documented in the CERCLIS investigation report(s)

FEDERAL DATABASE WELL INFORMATION

WELL QUADRANT	DISTANCE FROM TP	LITHOLOGY	DEPTH TO WATER TABLE
Northern	>2 Miles	Not Reported	40 ft.
Eastern	>2 Miles	Not Reported	10 ft.

STATE DATABASE WELL INFORMATION

WELL QUADRANT	DISTANCE FROM TP
Northern	>2 Miles

PUBLIC WATER SUPPLY SYSTEM INFORMATION

Searched by Nearest PWS.
NOTE: PWS System location is not always the same as well location.

PWS Name: HARRIS STEEL-SHOP #7 WEL
HARRIS STEEL-SHOP #7 WELL
1640 NEW MARKET AVE
SOUTH PLAINFIELD, NJ 07080

Location Relative to TP: 1 - 2 Miles North

PWS currently has or has had major violation(s) or enforcement: Yes

AREA RADON INFORMATION

State Radon Information for Zip Code: 07080

Tier	Comment	> 4 pCi/L	Sites Tested	Municipality, County
2 (Moderate Pot.)	(no change)	85 Sites	992	SOUTH PLAINFIELD, MIDDLESEX

EPA Radon Zone for MIDDLESEX County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK VERSION 2.1
SUMMARY

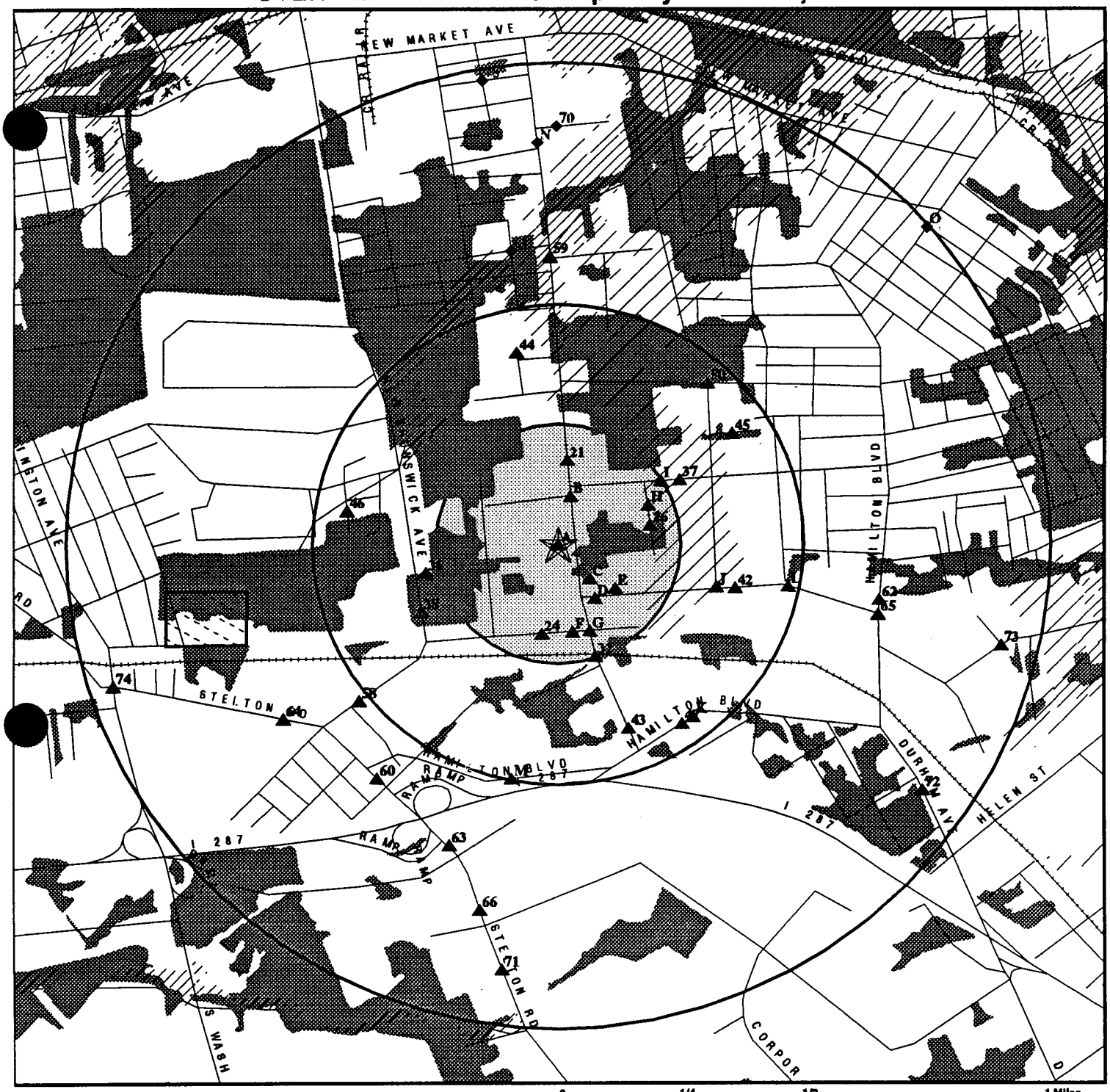
AREA RADON INFORMATION

MIDDLESEX COUNTY, NJ

Number of sites tested: 735

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area	0.850 pCi/L	95%	5%	0%
Basement	1.680 pCi/L	84%	16%	1%

OVERVIEW MAP - 1441071.1p - Roy F. Weston, Inc.



★ Target Property

▲ Sites at elevations higher than or equal to the target property

◆ Sites at elevations lower than the target property

♟ Coal Gasification Sites (if requested)

National Priority List Sites

Landfill Sites

Power transmission lines

Oil & Gas pipelines

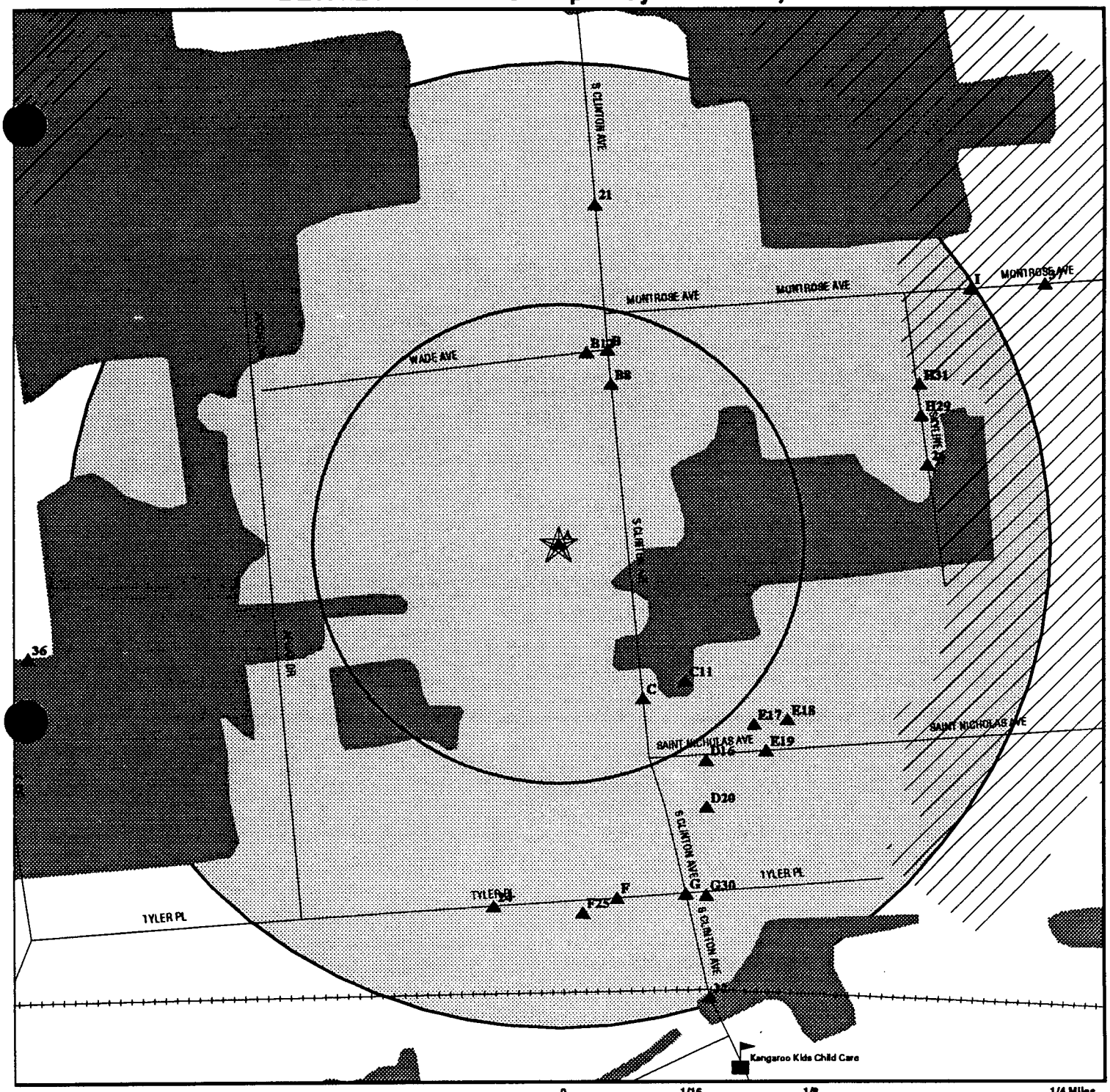
100-year flood zone

500-year flood zone

Wetlands per National Wetlands Inventory (1994)

TARGET PROPERTY:	Metz Metallurgical Corp	CUSTOMER:	Roy F. Weston, Inc.
ADDRESS:	3900 S Clinton Ave	CONTACT:	Ms Kierston Dorneman
CITY/STATE/ZIP:	South Plainfield NJ 07080	INQUIRY #:	1441071.1p
LAT/LONG:	40.5644 / 74.4302	DATE:	December 07, 1999 1:45 pm

DETAIL MAP - 1441071.1p - Roy F. Weston, Inc.



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Coal Gasification Sites (if requested)
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Wetlands per National Wetlands Inventory (1994)

TARGET PROPERTY:	Metz Metallurgical Corp	CUSTOMER:	Roy F. Weston, Inc.
ADDRESS:	3900 S Clinton Ave	CONTACT:	Ms Kierston Dorneman
CITY/STATE/ZIP:	South Plainfield NJ 07080	INQUIRY #:	1441071.1p
LAT/LONG:	40.5644 / 74.4302	DATE:	December 07, 1999 1:50 pm

MAP FINDINGS SUMMARY SHOWING ALL SITES

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NPL		1.000	0	0	0	1	NR	1
Delisted NPL		1.000	0	0	0	0	NR	0
RCRIS-TSD	X	0.500	0	1	0	NR	NR	1
State Haz. Waste		1.000	0	4	10	20	NR	34
CERCLIS	X	0.500	0	1	1	NR	NR	2
CERC-NFRAP		0.250	1	2	NR	NR	NR	3
CORRACTS	X	1.000	0	1	0	0	NR	1
State Landfill		0.500	0	0	0	NR	NR	0
LUST		0.500	1	1	7	NR	NR	9
UST	X	0.250	3	3	NR	NR	NR	6
RAATS		TP	NR	NR	NR	NR	NR	0
RCRIS Sm. Quan. Gen.		0.250	1	7	NR	NR	NR	8
RCRIS Lg. Quan. Gen.	X	0.250	3	7	NR	NR	NR	10
HMIRS		TP	NR	NR	NR	NR	NR	0
NJ PF		TP	NR	NR	NR	NR	NR	0
NJ Major Facilities	X	0.500	0	0	5	NR	NR	5
NJ Spill	X	TP	NR	NR	NR	NR	NR	0
NJ Release	X	TP	NR	NR	NR	NR	NR	0
CHROME		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
ERNS	X	TP	NR	NR	NR	NR	NR	0
FINDS	X	TP	NR	NR	NR	NR	NR	0
TRIS	X	TP	NR	NR	NR	NR	NR	0
NPL Liens		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
MLTS	X	TP	NR	NR	NR	NR	NR	0
ROD		1.000	0	0	0	1	NR	1
CONSENT		1.000	0	0	0	1	NR	1
Coal Gas		1.000	0	0	0	0	NR	0
MINES		0.250	0	1	NR	NR	NR	1

TP = Target Property

NR = Not Requested at this Search Distance

* Sites may be listed in more than one database

MAP FINDINGS SUMMARY SHOWING ONLY SITES HIGHER THAN OR THE SAME ELEVATION AS TP

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NPL		1.000	0	0	0	1	NR	1
Delisted NPL		1.000	0	0	0	0	NR	0
RCRIS-TSD	X	0.500	0	1	0	NR	NR	1
State Haz. Waste		1.000	0	4	10	12	NR	26
CERCLIS	X	0.500	0	1	1	NR	NR	2
CERC-NFRAP		0.250	1	2	NR	NR	NR	3
CORRACTS	X	1.000	0	1	0	0	NR	1
State Landfill		0.500	0	0	0	NR	NR	0
LUST		0.500	1	1	7	NR	NR	9
UST	X	0.250	3	3	NR	NR	NR	6
RAATS		TP	NR	NR	NR	NR	NR	0
RCRIS Sm. Quan. Gen.		0.250	1	7	NR	NR	NR	8
RCRIS Lg. Quan. Gen.	X	0.250	3	7	NR	NR	NR	10
HMIRS		TP	NR	NR	NR	NR	NR	0
NJ PF		TP	NR	NR	NR	NR	NR	0
NJ Major Facilities	X	0.500	0	0	5	NR	NR	5
NJ Spill	X	TP	NR	NR	NR	NR	NR	0
NJ Release	X	TP	NR	NR	NR	NR	NR	0
CHROME		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
ERNS	X	TP	NR	NR	NR	NR	NR	0
FINDS	X	TP	NR	NR	NR	NR	NR	0
TRIS	X	TP	NR	NR	NR	NR	NR	0
NPL Liens		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
MLTS	X	TP	NR	NR	NR	NR	NR	0
ROD		1.000	0	0	0	1	NR	1
CONSENT		1.000	0	0	0	1	NR	1
Coal Gas		1.000	0	0	0	0	NR	0
MINES		0.250	0	1	NR	NR	NR	1

TP = Target Property

NR = Not Requested at this Search Distance

* Sites may be listed in more than one database

Coal Gas Site Search: No site was found in a search of Real Property Scan's ENVIROHAZ database.

A3 Target Property — **DEGUSSA CORPORATION - METAL GROUP**
3900 S CLINTON AVE
SOUTH PLAINFIELD, NJ 70800

Maj Facilities **S101899982**
N/A

NJ MAJOR FACILITIES:

Facility ID:	1222002570
CAS Number:	50000
Hazardous Substance:	54238
Hazardous Substance Name:	FORMALDEHYDE
Haz Substance Stored Underground:	0
Haz Substance Stored in Other Places:	197116
Maximum Amount Storred:	6142

Facility ID:	1222002570
CAS Number:	67561
Hazardous Substance:	54238
Hazardous Substance Name:	METHANOL
Haz Substance Stored Underground:	0
Haz Substance Stored in Other Places:	197116
Maximum Amount Storred:	10000

Facility ID:	1222002570
CAS Number:	1310732
Hazardous Substance:	54238
Hazardous Substance Name:	SODIUM HYDROXIDE
Haz Substance Stored Underground:	0
Haz Substance Stored in Other Places:	197116
Maximum Amount Storred:	10978

Facility ID:	1222002570
CAS Number:	7647010
Hazardous Substance:	54238
Hazardous Substance Name:	HYDROCHLORIC ACID
Haz Substance Stored Underground:	0
Haz Substance Stored in Other Places:	197116
Maximum Amount Storred:	11927

Facility ID:	1222002570
CAS Number:	7697372
Hazardous Substance:	54238
Hazardous Substance Name:	NITRIC ACID
Haz Substance Stored Underground:	0
Haz Substance Stored in Other Places:	197116
Maximum Amount Storred:	9050

Facility ID:	1222002570
CAS Number:	********
Hazardous Substance:	54238
Hazardous Substance Name:	MISC SOLVENTS
Haz Substance Stored Underground:	0
Haz Substance Stored in Other Places:	197116
Maximum Amount Storred:	10560

DEGUSSA CORPORATION - METAL GROUP (Continued) **S101899982**

Facility ID:	1222002570
CAS Number:	********
Hazardous Substance:	54238
Hazardous Substance Name:	SILVER & SILVER COMPOUNDS
Haz Substance Stored Underground:	0
Haz Substance Stored in Other Places:	197116
Maximum Amount Storred:	178302

Facility ID:	1222002570
CAS Number:	68476302
Hazardous Substance:	54238
Hazardous Substance Name:	#2 FUEL OIL
Haz Substance Stored Underground:	0
Haz Substance Stored in Other Places:	197116
Maximum Amount Storred:	220

A4 Target Property **METALERTICAL**
3900 S CLINTON AVE
SOUTH PLAINFIELD, NJ

NJ Spills **S102613995**
N/A

NJ Spill:

Facility ID:	5727	Case Number:	97-5-5-2116-47
Date Received:	05/05/1997	Operator:	STIVE
Location:	Other	Nature of Incident:	Municipal
Facility Phone:	Not reported	Facility Type:	Commercial
Date of Incident:	05/05/1997	Time of Incident:	21:10
Substance(s):	Not reported		
Substance Type:	Liquid	Substance Identity:	Unknown
A310 Letter:	No	TCPA Chemical:	Unknown
Hazrds Material:	Unknown	CAS Number:	Not reported
COMU:	1222	Ref. Code:	002
Amnt Released:	UNK	Release VE:	Not reported
Release Type:	Continuous	Contained:	No
Injuries:	No	Facility Evacuation:	Yes
Public Exposure:	No	Public Evacuation:	No
Police at Scene:	Yes	Firemen at Scene:	Yes
Contamination of:	Land	Receiving Water:	Not reported
Caller:			
Name:	OPR 72	Title:	MIDDLESEX CNTY HAZ
Address:	FOR SOUTH PLAINFIELD, NJ		
Phone:	908-7276626		
Responsible Party:			
Name:	Known	Company:	METALERTICAL
Contact:	Not reported	Title:	Not reported
Address:	3900 SOUTH CLINTON NJ		
County:	Not reported	Phone:	Not reported
NJ Spill:			
Name:	NJSP OEM	Title:	TRP ETZEL
Phone:	609-882-2000		
Date:	05/05/1997	Time:	21:20
Local Municipality:			
Name:	Not reported	Title:	Not reported
Phone:	Not reported		
Date:	Not reported	Time:	Not reported
Other:			
Name:	Not reported	Title:	Not reported
Phone:	Not reported		

METALERTICAL (Continued) **S102613995**

Date: Not reported
Time: Not reported
Incident:
Name: FRANK GAGLIANO
Referred To: DRPSR
Region: ER2
Telephone: Home
Date: 05/05/1997
Incident Time: 21:18
ITM: B
Incident Description: Fire
Wind Direction/Speed: Not reported
Assistance Requested: No
Date A310 Letter Printed: 05/05/1997
Date Local Authority Was Notified: Not reported
Date Update: Not reported
Date Report Faxed to Local Authority: Not reported
Local Authority Notification Date 1: Not reported
Local Authority Notification Date 2: Not reported
Local Authority Notification Date 3: Not reported
Status at Spill: REPORTING A WORKING FIRE. UNKNOWN IF CHEMICALS ARE INVOLVED.
Comments: Not reported

A1 Target Property **DEGUSSA CORP**
3900 S CLINTON AVE
SOUTH PLAINFIELD, NJ

NJ Release **S103900285**
N/A

NJ Release:
Facility ID: 44868.00000
Case Number: 99-06-17-0855-17
Date Received: Not reported
Operator: JIMH
Location: Not reported
Nature of Incident: Not reported
Facility Phone: 908-561-1100
Facility Type: Industrial
Date of Incident: Not reported
Time of Incident: Not reported
Substance(s): Not reported
Substance Type: Not reported
Substance Identity: Not reported
A310 Letter: Not reported
TCPA Chemical: Not reported
Hazrds Material: Not reported
CAS Number: Not reported
COMU: 1222
Ref. Code: 002
Amnt Released: Not reported
Release VE: Not reported
Release Type: Not reported
Contained: Not reported
Injuries: No
Facility Evacuation: Not reported
Public Exposure: Not reported
Public Evacuation: Not reported
Police at Scene: Not reported
Firemen at Scene: Not reported
Contamination of: Not reported
Receiving Water: Not reported
Caller:
Name: JAMES LEAHEY
Title: DEGUSSA CORP
Address: 3900 S. CLINTON AVE
SOUTH PLAINFIELD, NJ
Telephone: 908-561-1100
Responsible Party:
Name: Known
Company: Not reported
Contact: Not reported
Title: Not reported
Address: Not reported
County: Not reported
Telephone: Not reported
NJ Spill:
Name: Not reported
Title: Not reported
Telephone: Not reported
Date: Not reported
Time: Not reported
Local Municipality:
Name: Not reported
Municipality Title: Not reported
Telephone: Not reported
Date: Not reported
Time: Not reported
Other:

DEGUSSA CORP (Continued) **S103900285**

Name: Not reported
Telephone: Not reported
Date: Not reported
Title: Not reported
Time: Not reported
Incident:
Name: Not reported
Region: Not reported
Date: Not reported
ITM: Not reported
Referred To: Not reported
Telephone: Not reported
Incident Time: Not reported
Incident Description: Not reported
Wind Direction/Speed: Not reported
Assistance Requested: No
Date A310 Letter Printed: Not reported
Date Local Authority Was Notified: Not reported
Date Update: Not reported
Date Report Faxed to Local Authority: Not reported
Local Authority Notification Date 1: Not reported
Local Authority Notification Date 2: Not reported
Local Authority Notification Date 3: Not reported
Status at Spill: Not reported
Comments: Not reported

A2 Target Property — **3900 S CLINTON AVE**, **3900 S CLINTON AVE**, **SOUTH PLAINFIELD, NJ** — **ERNS** — **90189111**, **N/A**

A7 Target Property — **DEGUSSA CORP METAL GROUP**, **3900 S CLINTON AVE**, **SOUTH PLAINFIELD, NJ 07080**

CERCLIS **1000442690**
FINDS **NJD002195303**
RCRIS-LQG
TRIS
RCRIS-TSD
MLTS
CORRACTS
UST
NJ Release

CERCLIS Classification Data:
Site Incident Category: Not reported
Ownership Status: Unknown
Federal Facility: Not a Federal Facility
NPL Status: Not on the NPL
Contact: MICHELE BRICE-ROBINSON — Contact Tel: (212) 637-3300
Contact: BOBBY DEASE — Contact Tel: (732) 906-6893
Contact: EUGENE DOMINACH — Contact Tel: (908) 321-6666
Contact: HONORA DROHAN — Contact Tel: (212) 637-4355
Contact: GLADYS LEYNES — Contact Tel: (212) 637-3301
Contact: MARK SAVEDOFF — Contact Tel: (732) 321-4341
Contact: MARK SAVEDOFF — Contact Tel: (908) 321-4341

CERCLIS Assessment History:
Assessment: DISCOVERY — Completed: 19890606
Assessment: PRELIMINARY ASSESSMENT — Completed: 19890720
Assessment: SITE INSPECTION — Completed: 19910924

CERCLIS Site Status:
Low

CERCLIS Alias Name(s):
METZ METALLURGICAL CORP.

CORRACTS Data:
Prioritization: High
Status: RCRA Facility Assessment Completed

DEGUSSA CORP METAL GROUP (Continued) **1000442690**

RCRIS:
Owner: DEGUSSA CORP
(201) 641-6100

Contact: PETER E BECKER
(908) 561-1100

Record Date: 10/30/1991

Classification: Large Quantity Generator, Small Quantity Generator, TSDF

Used Oil Recyc: No

TSDF Activities: Not reported

Violation Status: Violation information exist

There are 5 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Evaluation Inspection (CEI)	Generator-All Requirements	08/14/1998
Non-Financial Record Review	Generator-All Requirements	11/14/1995
Non-Financial Record Review	Generator-All Requirements	11/14/1995
Compliance Evaluation Inspection (CEI)	Generator-All Requirements	07/08/1987
Compliance Evaluation Inspection (CEI)	Generator-All Requirements	12/24/1984
	Generator-All Requirements	05/15/1984

FINDS:
Other Pertinent Environmental Activity Identified at Site:
AIRS Facility System (AIRS/AFS)
Permit Compliance System (PCS)

NJ Release:

Facility ID:	5270	Case Number:	93-4-2-1820-12
Date Received:	04/02/1993	Operator:	DAVE
Location:	Facility	Nature of Incident:	Facility
Facility Phone:	908-561-1100	Facility Type:	Industrial
Date of Incident:	04/02/1993	Time of Incident:	17:30
Substance(s):	NOX		
Substance Type:	Gas	Substance Identity:	Known
A310 Letter:	No	TCPA Chemical:	Yes
Hazrds Material:	Yes	CAS Number:	Not reported
COMU:	1222	Ref. Code:	002
Amnt Released:	UNK	Release VE:	Not reported
Release Type:	Terminated	Contained:	No
Injuries:	No	Facility Evacuation:	No
Public Exposure:	No	Public Evacuation:	No
Police at Scene:	Yes	Firemen at Scene:	Yes
Contamination of:	Air	Receiving Water:	Not reported
Caller:			
Name:	JIM BARNA	Title:	DEGUSSA
Address:	3900 S CLINTON AVE SOUTH PLAINFIELD, NJ		
Telephone:	908-561-1100		
Responsible Party:			
Name:	Known	Company:	DEGUSSA
Contact:	JIM BARNA	Title:	1ST LEVEL MG
Address:	3900 S CLINTON AVE SOUTH PLAINFIELD, NJ		

DEGUSSA CORP METAL GROUP (Continued) **1000442690**

County:	MIDDLESEX	Telephone:	908-561-1100
NJ Spill:			
Name:	OEM	Title:	TPR MISHAK
Telephone:	609-882-2000		
Date:	04/02/1993	Time:	18:22
Local Municipality:			
Name:	SOUTH PLAINFIELD B	Municipality Title:	Not reported
Telephone:	908-755-0700		
Date:	04/02/1993	Time:	Not reported
Other:			
Name:	Not reported	Title:	Not reported
Telephone:	Not reported		
Date:	Not reported	Time:	Not reported
Incident:			
Name:	F GAGLIANO	Referred To:	DRPSR
Region:	ER2	Telephone:	Paged
Date:	04/02/1993	Incident Time:	19:24
ITM:	B		

Incident Description:	Air Release
Wind Direction/Speed:	Not reported
Assistance Requested:	No
Date A310 Letter Printed:	Not reported
Date Local Authority Was Notified:	Not reported
Date Update:	Not reported
Date Report Faxed to Local Authority:	Not reported
Local Authority Notification Date 1:	Not reported
Local Authority Notification Date 2:	Not reported
Local Authority Notification Date 3:	Not reported
Status at Spill:	NOX RELEASE DUE TO UNK CAUSE, NEUTRAL PH IN SCRUBBER MAY BE THE CAUSE.
Comments:	NJSP & A310 NOTIF MADE ON TD 5269. THIS IS THE RP FROM TD 5269 DHK

Facility ID:	13955	Case Number:	93-8-17-1632-42
Date Received:	08/17/1993	Operator:	DAVE
Location:	Facility	Nature of Incident:	Facility
Facility Phone:	908-561-1100	Facility Type:	Industrial
Date of Incident:	08/17/1993	Time of Incident:	11:00
Substance(s):	NOX		
Substance Type:	Gas	Substance Identity:	Known
A310 Letter:	Yes	TCPA Chemical:	Yes
Hazrds Material:	Yes	CAS Number:	Not reported
COMU:	1222	Ref. Code:	050
Amnt Released:	UNK	Release VE:	Not reported
Release Type:	Terminated	Contained:	No
Injuries:	No	Facility Evacuation:	No
Public Exposure:	No	Public Evacuation:	No
Police at Scene:	No	Firemen at Scene:	No
Contamination of:	Air	Receiving Water:	Not reported
Caller:			
Name:	JIM FEDORCHAK	Title:	DEGUSSA CORP
Address:	3900 S CLINTON AVE SOUTH PLAINFIELD, NJ		
Telephone:	908-561-1100		
Responsible Party:			
Name:	Known	Company:	DEGUSSA CORP
Contact:	JIM FEDORCHAK	Title:	Not reported
Address:	3900 S CLINTON AVE SOUTH PLAINFIELD, NJ		

DEGUSSA CORP METAL GROUP (Continued) **1000442690**

County:	MIDDLESEX	Telephone:	908-561-1100
NJ Spill:			
Name:	OEM	Title:	SGT CONNOLLY
Telephone:	609-882-2000		
Date:	08/17/1993	Time:	16:40
Local Municipality:			
Name:	SOUTH PLAINFIELD B	Municipality Title:	DISP 8016
Telephone:	908-755-0700		
Date:	08/17/1993	Time:	16:41
Other:			
Name:	Not reported	Title:	Not reported
Telephone:	Not reported		
Date:	Not reported	Time:	Not reported
Incident:			
Name:	Not reported	Referred To:	DRPE
Region:	BRPV	Telephone:	Not reported
Date:	08/17/1993	Incident Time:	Not reported
ITM:	B		
Name:	Not reported	Referred To:	DRPSR
Region:	HQ1	Telephone:	Not reported
Date:	08/17/1993	Incident Time:	Not reported
ITM:	T		

Incident Description:	Air Release
Wind Direction/Speed:	Not reported
Assistance Requested:	No
Date A310 Letter Printed:	Not reported
Date Local Authority Was Notified:	Not reported
Date Update:	Not reported
Date Report Faxed to Local Authority:	Not reported
Local Authority Notification Date 1:	Not reported
Local Authority Notification Date 2:	Not reported
Local Authority Notification Date 3:	Not reported
Status at Spill:	TRANFERRING CONDENSIT TO AN EMPTY REACTOR, REACTOR HAS SILVER IN IT, SILVER DISSOLVED, NOX EMITTED. NON-EMERGENT SITUATION, EVERYTHING OK NOW.
Comments:	Not reported

DEGUSSA CORP METAL GROUP (Continued) **1000442690**

UST:

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/77 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	26.0	Owner Tank ID:	ESC8

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	185.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	H. OTHER: CONCRETE
Tank Structure:	A. SINGLE WALL
Pipe Contents:	H. OTHER
Pipe Structure:	Not reported
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	D. EMERGENCY SPILL TANK (SUMP)
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/77 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	27.0	Owner Tank ID:	ESC9

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	185.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	H. OTHER: CONCRETE
Tank Structure:	A. SINGLE WALL
Pipe Contents:	H. OTHER: CONCRETE H. OTHER: NO PIPING
Pipe Structure:	C. OTHER: NO PIPING
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	D. EMERGENCY SPILL TANK (SUMP)
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

DEGUSSA CORP METAL GROUP (Continued) **1000442690**

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/67 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	28.0	Owner Tank ID:	ESQ4

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	70.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	H. OTHER: CONCRETE
Tank Structure:	A. Single Wall
Pipe Contents:	H. Other
Pipe Structure:	C. Other
Over Fill Products:	Yes
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/67 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	29.0	Owner Tank ID:	ES10

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	58.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	H. OTHER: CONCRETE
Tank Structure:	A. SINGLE WALL
Pipe Contents:	H. OTHER: CONCRETE H. OTHER: NO PIPING
Pipe Structure:	A. SINGLE WALL C. OTHER: NO PIPING
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	D. EMERGENCY SPILL TANK (SUMP)
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

DEGUSSA CORP METAL GROUP (Continued) **1000442690**

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/77 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	30.0	Owner Tank ID:	EXTL

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	320.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	H. OTHER: PVC D. FIBERGLASS-REINFORCED PLASTIC
Tank Structure:	A. SINGLE WALL
Pipe Contents:	H. OTHER: PVC D. FIBERGLASS-REINFORCED PLASTIC
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	Yes
Spill Containment Around Fill Pipe:	No
Tank Status:	D. EMERGENCY SPILL TANK (SUMP)
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/72 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	31.0	Owner Tank ID:	E2

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	1000.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	D. Fiberglass-reinforced plastic
Tank Structure:	A. Single Wall
Pipe Contents:	H. OTHER: PVC D. FIBERGLASS-REINFORCED PLASTIC A. BARE STEEL
Pipe Structure:	A. Single Wall
Over Fill Products:	Yes
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

DEGUSSA CORP METAL GROUP (Continued) **1000442690**

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/81 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	24.0	Owner Tank ID:	ESC6

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	10000.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	H. OTHER: CONCRETE
Tank Structure:	A. Single Wall
Pipe Contents:	D. FIBERGLASS-REINFORCED PLASTIC H. OTHER: CONCRETE
Pipe Structure:	A. Single Wall
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/67 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	2...0	Owner Tank ID:	ESC4

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	0.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	H. OTHER: CONCRETE
Tank Structure:	A. SINGLE WALL
Pipe Contents:	H. OTHER: CONCRETE H. OTHER: NO PIPING
Pipe Structure:	C. OTHER: NO PIPING
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	D. EMERGENCY SPILL TANK (SUMP)
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

DEGUSSA CORP METAL GROUP (Continued) **1000442690**

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/82 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	25.0	Owner Tank ID:	ESC7

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	185.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	H. OTHER: CONCRETE
Tank Structure:	A. SINGLE WALL
Pipe Contents:	H. OTHER
Pipe Structure:	C. OTHER: NO PIPING
Over Fill Products:	Yes
Spill Containment Around Fill Pipe:	No
Tank Status:	D. EMERGENCY SPILL TANK (SUMP)
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/81 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	20.0	Owner Tank ID:	ESC2

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	82.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	H. OTHER: CONCRETE
Tank Structure:	A. SINGLE WALL
Pipe Contents:	H. OTHER: CONCRETE
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	D. EMERGENCY SPILL TANK (SUMP)
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

DEGUSSA CORP METAL GROUP (Continued) **1000442690**

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/82 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	21.0	Owner Tank ID:	ESC3

Operator: Not reported
Operator Address: Not reported
Owner: DEGUSSA CORPORATION
Owner Address: 3900 S CLINTON AVE
S PLAINFIELD, NJ 07080
Tank Capacity: 147.00 Gallons
Tank Contents: P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction: H. OTHER: CONCRETE
Tank Structure: A. Single Wall
Pipe Contents: H. OTHER: CONCRETE
Pipe Structure: A. Single Wall
Over Fill Products: No
Spill Containment Around Fill Pipe: No
Tank Status: G. REMOVED
Date Tank Removed: Not reported
Date Tank Abandoned in Place: Not reported
Date Tank Taken Out of Service: Not reported
Date of Tank Sale or Transfer: Not reported
Tank Closure Number: Not reported
Tank ISRA Number: Not reported
Tank in Wellhead Protection Area: Not reported
Is Facility in Compliance Rules: 0

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/81 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	23.0	Owner Tank ID:	ESC5

Operator: Not reported
Operator Address: Not reported
Owner: DEGUSSA CORPORATION
Owner Address: 3900 S CLINTON AVE
S PLAINFIELD, NJ 07080
Tank Capacity: 135.00 Gallons
Tank Contents: P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction: H. OTHER: CONCRETE
Tank Structure: A. Single Wall
Pipe Contents: D. FIBERGLASS-REINFORCED PLASTIC H. OTHER: CONCRETE
Pipe Structure: A. Single Wall
Over Fill Products: No
Spill Containment Around Fill Pipe: No
Tank Status: G. REMOVED
Date Tank Removed: Not reported
Date Tank Abandoned in Place: Not reported
Date Tank Taken Out of Service: Not reported
Date of Tank Sale or Transfer: Not reported
Tank Closure Number: Not reported
Tank ISRA Number: Not reported
Tank in Wellhead Protection Area: Not reported
Is Facility in Compliance Rules: 0

DEGUSSA CORP METAL GROUP (Continued) **1000442690**

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/85 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	8.00	Owner Tank ID:	EPS6

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	2150.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	D. FIBERGLASS-REINFORCED PLASTIC H. OTHER: PVC
Tank Structure:	A. SINGLE WALL
Pipe Contents:	D. FIBERGLASS-REINFORCED PLASTIC H. OTHER: PVC
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	Yes
Spill Containment Around Fill Pipe:	No
Tank Status:	D. EMERGENCY SPILL TANK (SUMP)
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/77 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	18.0	Owner Tank ID:	EQS5

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	50.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	H. OTHER: CONCRETE
Tank Structure:	A. Single Wall
Pipe Contents:	H. OTHER: CONCRETE
Pipe Structure:	C. Other
Over Fill Products:	Yes
Spill Containment Around Fill Pipe:	No
Tank Status:	G. Removed
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

DEGUSSA CORP METAL GROUP (Continued) **1000442690**

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/80 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	1.00	Owner Tank ID:	ED

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	5000.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	H. OTHER: PVC D. FIBERGLASS-REINFORCED PLASTIC
Tank Structure:	A. SINGLE WALL A. SINGLE WALL
Pipe Contents:	H. OTHER: PVC D. FIBERGLASS-REINFORCED PLASTIC
Pipe Structure:	A. Single Wall
Over Fill Products:	Yes
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/80 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	2.00	Owner Tank ID:	EE

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	3000.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	H. OTHER: PVC D. FIBERGLASS-REINFORCED PLASTIC
Tank Structure:	A. SINGLE WALL A. SINGLE WALL
Pipe Contents:	H. OTHER: PVC D. FIBERGLASS-REINFORCED PLASTIC A. BARE STEEL
Pipe Structure:	A. Single Wall
Over Fill Products:	Yes
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

DEGUSSA CORP METAL GROUP (Continued) **1000442690**

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/72 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	3.00	Owner Tank ID:	EPS1

Operator: Not reported
Operator Address: Not reported
Owner: DEGUSSA CORPORATION
Owner Address: 3900 S CLINTON AVE
S PLAINFIELD, NJ 07080
Tank Capacity: 3700.00 Gallons
Tank Contents: P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction: H. OTHER: PVC D. FIBERGLASS-REINFORCED PLASTIC
Tank Structure: A. SINGLE WALL
Pipe Contents: H. OTHER: PVC D. FIBERGLASS-REINFORCED PLASTIC A. BARE STEEL
Pipe Structure: A. SINGLE WALL
Over Fill Products: Yes
Spill Containment Around Fill Pipe: No
Tank Status: D. EMERGENCY SPILL TANK (SUMP)
Date Tank Removed: Not reported
Date Tank Abandoned in Place: Not reported
Date Tank Taken Out of Service: Not reported
Date of Tank Sale or Transfer: Not reported
Tank Closure Number: Not reported
Tank ISRA Number: Not reported
Tank in Wellhead Protection Area: Not reported
Is Facility in Compliance Rules: 0

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/72 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	4.00	Owner Tank ID:	EPS2

Operator: Not reported
Operator Address: Not reported
Owner: DEGUSSA CORPORATION
Owner Address: 3900 S CLINTON AVE
S PLAINFIELD, NJ 07080
Tank Capacity: 1700.00 Gallons
Tank Contents: P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction: H. OTHER: PVC
Tank Structure: A. SINGLE WALL
Pipe Contents: H. OTHER: PVC D. FIBERGLASS-REINFORCED PLASTIC
Pipe Structure: A. SINGLE WALL
Over Fill Products: Yes
Spill Containment Around Fill Pipe: No
Tank Status: D. EMERGENCY SPILL TANK (SUMP)
Date Tank Removed: Not reported
Date Tank Abandoned in Place: Not reported
Date Tank Taken Out of Service: Not reported
Date of Tank Sale or Transfer: Not reported
Tank Closure Number: Not reported
Tank ISRA Number: Not reported
Tank in Wellhead Protection Area: Not reported
Is Facility in Compliance Rules: 0

DEGUSSA CORP METAL GROUP (Continued) 1000442690

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/72 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	5.00	Owner Tank ID:	EPS3

Operator: Not reported
Operator Address: Not reported
Owner: DEGUSSA CORPORATION
Owner Address: 3900 S CLINTON AVE
S PLAINFIELD, NJ 07080
Tank Capacity: 3090.00 Gallons
Tank Contents: P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction: H. OTHER: PVC D. FIBERGLASS-REINFORCED PLASTIC
Tank Structure: A. SINGLE WALL
Pipe Contents: H. OTHER: PVC D. FIBERGLASS-REINFORCED PLASTIC
Pipe Structure: A. SINGLE WALL
Over Fill Products: Yes
Spill Containment Around Fill Pipe: No
Tank Status: D. EMERGENCY SPILL TANK (SUMP)
Date Tank Removed: Not reported
Date Tank Abandoned in Place: Not reported
Date Tank Taken Out of Service: Not reported
Date of Tank Sale or Transfer: Not reported
Tank Closure Number: Not reported
Tank ISRA Number: Not reported
Tank in Wellhead Protection Area: Not reported
Is Facility in Compliance Rules: 0

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/84 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	6.00	Owner Tank ID:	EPS4

Operator: Not reported
Operator Address: Not reported
Owner: DEGUSSA CORPORATION
Owner Address: 3900 S CLINTON AVE
S PLAINFIELD, NJ 07080
Tank Capacity: 1117.00 Gallons
Tank Contents: P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction: D. FIBERGLASS-REINFORCED PLASTIC H. OTHER: PVC
Tank Structure: A. Single Wall
Pipe Contents: D. FIBERGLASS-REINFORCED PLASTIC H. OTHER: PVC
Pipe Structure: A. Single Wall
Over Fill Products: Yes
Spill Containment Around Fill Pipe: No
Tank Status: G. REMOVED
Date Tank Removed: Not reported
Date Tank Abandoned in Place: Not reported
Date Tank Taken Out of Service: Not reported
Date of Tank Sale or Transfer: Not reported
Tank Closure Number: Not reported
Tank ISRA Number: Not reported
Tank in Wellhead Protection Area: Not reported
Is Facility in Compliance Rules: 0

DEGUSSA CORP METAL GROUP (Continued) **1000442690**

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/84 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	7.00	Owner Tank ID:	EPS5

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	1035.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	D. FIBERGLASS-REINFORCED PLASTIC H. OTHER: PVC
Tank Structure:	A. Single Wall
Pipe Contents:	D. FIBERGLASS-REINFORCED PLASTIC H. OTHER: PVC
Pipe Structure:	A. Single Wall
Over Fill Products:	Yes
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/77 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	10.0	Owner Tank ID:	EPS8

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	258.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	D. FIBERGLASS-REINFORCED PLASTIC H. OTHER: PVC
Tank Structure:	A. Single Wall
Pipe Contents:	H. OTHER: PVC D. FIBERGLASS-REINFORCED PLASTIC
Pipe Structure:	A. Single Wall
Over Fill Products:	Yes
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

DEGUSSA CORP METAL GROUP (Continued) **1000442690**

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/80 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	14.0	Owner Tank ID:	EP4

Operator: Not reported
Operator Address: Not reported
Owner: DEGUSSA CORPORATION
Owner Address: 3900 S CLINTON AVE
S PLAINFIELD, NJ 07080
Tank Capacity: 2000.00 Gallons
Tank Contents: P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction: D. FIBERGLASS-REINFORCED PLASTIC H. OTHER: PVC
Tank Structure: A. SINGLE WALL A. SINGLE WALL
Pipe Contents: H. OTHER: PVC D. FIBERGLASS-REINFORCED PLASTIC
Pipe Structure: A. Single Wall
Over Fill Products: No
Spill Containment Around Fill Pipe: No
Tank Status: G. Removed
Date Tank Removed: Not reported
Date Tank Abandoned in Place: Not reported
Date Tank Taken Out of Service: Not reported
Date of Tank Sale or Transfer: Not reported
Tank Closure Number: Not reported
Tank ISRA Number: Not reported
Tank in Wellhead Protection Area: Not reported
Is Facility in Compliance Rules: 0

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/67 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	16.0	Owner Tank ID:	EQS2

Operator: Not reported
Operator Address: Not reported
Owner: DEGUSSA CORPORATION
Owner Address: 3900 S CLINTON AVE
S PLAINFIELD, NJ 07080
Tank Capacity: 70.00 Gallons
Tank Contents: P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction: H. OTHER: CONCRETE
Tank Structure: A. Single Wall
Pipe Contents: H. OTHER: CONCRETE H. OTHER: NO PIPING
Pipe Structure: C. OTHER: NO PIPING
Over Fill Products: Yes
Spill Containment Around Fill Pipe: No
Tank Status: G. Removed
Date Tank Removed: Not reported
Date Tank Abandoned in Place: Not reported
Date Tank Taken Out of Service: Not reported
Date of Tank Sale or Transfer: Not reported
Tank Closure Number: Not reported
Tank ISRA Number: Not reported
Tank in Wellhead Protection Area: Not reported
Is Facility in Compliance Rules: 0

DEGUSSA CORP METAL GROUP (Continued) **1000442690**

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/67 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	17.0	Owner Tank ID:	EQS3

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	70.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	H. OTHER: CONCRETE
Tank Structure:	A. Single Wall
Pipe Contents:	H. OTHER: CONCRETE
Pipe Structure:	A. Single Wall
Over Fill Products:	Yes
Spill Containment Around Fill Pipe:	No
Tank Status:	G. Removed
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/80 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	11.0	Owner Tank ID:	EP1

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	2000.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	D. FIBERGLASS-REINFORCED PLASTIC H. OTHER: PVC
Tank Structure:	A. SINGLE WALL A. SINGLE WALL
Pipe Contents:	H. OTHER: PVC D. FIBERGLASS-REINFORCED PLASTIC
Pipe Structure:	A. Single Wall
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. Removed
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

DEGUSSA CORP METAL GROUP (Continued) **1000442690**

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/80 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	12.0	Owner Tank ID:	EP2

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	2000.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	D. FIBERGLASS-REINFORCED PLASTIC H. OTHER: PVC
Tank Structure:	A. SINGLE WALL A. SINGLE WALL
Pipe Contents:	H. OTHER: PVC D. FIBERGLASS-REINFORCED PLASTIC
Pipe Structure:	A. Single Wall
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. Removed
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/84 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	9.00	Owner Tank ID:	EPS7

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	1870.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	D. FIBERGLASS-REINFORCED PLASTIC H. OTHER: PVC
Tank Structure:	A. Single Wall
Pipe Contents:	D. FIBERGLASS-REINFORCED PLASTIC H. OTHER: PVC
Pipe Structure:	A. Single Wall
Over Fill Products:	Yes
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

DEGUSSA CORP METAL GROUP (Continued) **1000442690**

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/67 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	15.0	Owner Tank ID:	EQS1

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	70.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	H. OTHER: CONCRETE
Tank Structure:	A. Single Wall
Pipe Contents:	H. Other
Pipe Structure:	C. Other
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. Removed
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/79 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	19.0	Owner Tank ID:	ESC1

Operator:	Not reported
Operator Address:	Not reported
Owner:	DEGUSSA CORPORATION
Owner Address:	3900 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	395.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	H. OTHER: CONCRETE H. OTHER: CONCRETE
Tank Structure:	A. SINGLE WALL
Pipe Contents:	H. OTHER: CONCRETE
Pipe Structure:	Not reported
Over Fill Products:	Yes
Spill Containment Around Fill Pipe:	No
Tank Status:	D. EMERGENCY SPILL TANK (SUMP)
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

DEGUSSA CORP METAL GROUP (Continued) **1000442690**

Facility ID:	0099525	Facility Status:	Active
Install Date:	1/1/80 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	13.0	Owner Tank ID:	EP3

Operator: Not reported
Operator Address: Not reported
Owner: DEGUSSA CORPORATION
Owner Address: 3900 S CLINTON AVE
S PLAINFIELD, NJ 07080
Tank Capacity: 2000.00 Gallons
Tank Contents: P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction: D. FIBERGLASS-REINFORCED PLASTIC H. OTHER: PVC
Tank Structure: A. SINGLE WALL A. SINGLE WALL
Pipe Contents: H. OTHER: PVC D. FIBERGLASS-REINFORCED PLASTIC
Pipe Structure: A. Single Wall
Over Fill Products: No
Spill Containment Around Fill Pipe: No
Tank Status: G. Removed
Date Tank Removed: Not reported
Date Tank Abandoned in Place: Not reported
Date Tank Taken Out of Service: Not reported
Date of Tank Sale or Transfer: Not reported
Tank Closure Number: Not reported
Tank ISRA Number: Not reported
Tank in Wellhead Protection Area: Not reported
Is Facility in Compliance Rules: 0

A6 Target Property **DEGUSSA**
3900 S CLINTON AVE
SOUTH PLAINFIELD, NJ

NJ Release **S102197436**
N/A

NJ Release:

Facility ID:	15147	Case Number:	93-9-4-2240-43
Date Received:	09/04/1993	Operator:	PAT
Location:	Facility	Nature of Incident:	Municipal
Facility Phone:	Not reported	Facility Type:	Commercial
Date of Incident:	09/04/1993	Time of Incident:	22:30
Substance(s):	UNKNOWN GAS		
Substance Type:	Gas	Substance Identity:	Known
A310 Letter:	No	TCPA Chemical:	Unknown
Hazrds Material:	Unknown	CAS Number:	Not reported
COMU:	1222	Ref. Code:	002
Amnt Released:	UNK	Release VE:	Not reported
Release Type:	Continuous	Contained:	No
Injuries:	No	Facility Evacuation:	No
Public Exposure:	Yes	Public Evacuation:	Yes
Police at Scene:	Yes	Firemen at Scene:	Yes
Contamination of:	Air	Receiving Water:	Not reported

Caller:

Name:	KEN SCHUCHARDT	Title:	MIDDLESEX HAZMAT
Address:	FOR SO PLAINFIELD PD		
Telephone:	908-727-6622		

Responsible Party:

Name:	Known	Company:	DEGUSSA
Contact:	Not reported	Title:	Not reported
Address:	3900 SO CLINTON AVE SOUTH PLAINFIELD, NJ		
County:	MIDDLESEX	Telephone:	Not reported

NJ Spill:

DEGUSSA (Continued) **S102197436**

Name:	NJSP-OEM	Title:	TPR. NUTT
Telephone:	609-882-2000		
Date:	09/04/1993	Time:	22:45
Local Municipality:			
Name:	Not reported	Municipality Title:	Not reported
Telephone:	Not reported		
Date:	Not reported	Time:	Not reported
Other:			
Name:	Not reported	Title:	Not reported
Telephone:	Not reported		
Date:	Not reported	Time:	Not reported
Incident:			
Name:	FRANK GAGLIANO	Referred To:	DRPSR
Region:	ER2	Telephone:	Home,Faxed
Date:	09/04/1993	Incident Time:	22:42
ITM:	B		

Incident Description:	Air Release
Wind Direction/Speed:	Not reported
Assistance Requested:	No
Date A310 Letter Printed:	Not reported
Date Local Authority Was Notified:	Not reported
Date Update:	Not reported
Date Report Faxed to Local Authority:	Not reported
Local Authority Notification Date 1:	Not reported
Local Authority Notification Date 2:	Not reported
Local Authority Notification Date 3:	Not reported
Status at Spill:	UNKNOWN GAS COMING FROM STACK AT FACILITY. UNKNOWN HOW MANY PEOPLE EVACUATED. HAZMAT ENROUTE. PRODUCT MAY BE AMMONIUM CHLORIDE OR HCL.
Comments:	Not reported

A5 Target Property — **3900 SOUTH CLINTON AVE METZ PLANT**
3900 SOUTH CLINTON AVE METZ PLANT
SOUTH PLAINFIELD, NJ

ERNS **90159415**
N/A

NPL Region West 1/2-1 3379 — **CHEMSOL INC SITE - USEPA**
FOOT OF FLEMING ST
PISCATAWAY, NJ 08854

CERCLIS **1000303344**
FINDS **NJD980528889**
NPL
RCRIS-LQG
CONSENT
ROD

CERCLIS Classification Data:

Site Incident Category:	Not reported	Federal Facility:	Not a Federal Facility
Ownership Status:	Private	NPL Status:	Currently on the Final NPL
Contact:	NORMAN W BERNSTEIN	Contact Tel:	Not reported
Contact:	LEE A BRAEM	Contact Tel:	Not reported
Contact:	MICHELE BRICE-ROBINSON	Contact Tel:	(212) 637-3300
Contact:	ALLYN MYLES CARNAM	Contact Tel:	Not reported
Contact:	JOSEPH T CHILDS	Contact Tel:	Not reported
Contact:	ETTA RYAN CLARK	Contact Tel:	Not reported
Contact:	ALLAN DANZIG	Contact Tel:	Not reported
Contact:	BOBBY DEASE	Contact Tel:	(732) 906-6893
Contact:	EUGENE DOMINACH	Contact Tel:	(908) 321-6666
Contact:	HONORA DROHAN	Contact Tel:	(212) 637-4355
Contact:	CAROL L DUDNICK	Contact Tel:	Not reported
Contact:	DANIEL FLYNN	Contact Tel:	Not reported
Contact:	ELLEN FRIEDEL	Contact Tel:	Not reported

CHEMSOL INC SITE - USEPA (Continued) **1000303344**

Contact:	SEN GEN	Contact Tel:	Not reported
Contact:	WILLIAM F GIARLA	Contact Tel:	Not reported
Contact:	KATHLEEN GILLMORE	Contact Tel:	Not reported
Contact:	MICHAEL F HEALY	Contact Tel:	Not reported
Contact:	MICHAEL P HEALY	Contact Tel:	Not reported
Contact:	BRUCE J HECTOR	Contact Tel:	Not reported
Contact:	WILLIAM S HOOD	Contact Tel:	Not reported
Contact:	LISA JACKSON	Contact Tel:	(212) 637-4274
Contact:	JOHN JACOBI	Contact Tel:	Not reported
Contact:	Lisa Jackson	Contact Tel:	Not reported
Contact:	KAREN GAYNOR KILLEEN	Contact Tel:	Not reported
Contact:	BERYL KUDER	Contact Tel:	Not reported
Contact:	ED LAIRD	Contact Tel:	Not reported
Contact:	GLADYS LEYNES	Contact Tel:	(212) 637-3301
Contact:	DOUGLAS MARTIN	Contact Tel:	Not reported
Contact:	R SCOTT MCCAY	Contact Tel:	Not reported
Contact:	RALPH L MCMURRY	Contact Tel:	Not reported
Contact:	THOMAS E MERCHANT	Contact Tel:	Not reported
Contact:	MICHAEL NEILL	Contact Tel:	(908) 321-6694
Contact:	DAVID T NOBLE	Contact Tel:	Not reported
Contact:	LEONARD P PASCULLI	Contact Tel:	Not reported
Contact:	CAROLE PETERSEN	Contact Tel:	(212) 637-4418
Contact:	JOHN PRINCE	Contact Tel:	(212) 637-4382
Contact:	BERNARD J REILLY	Contact Tel:	Not reported
Contact:	JULIETTE RICHTER	Contact Tel:	Not reported
Contact:	NIGEL ROBINSON	Contact Tel:	(212) 637-4394
Contact:	ATT SYDNEY ROOKS	Contact Tel:	Not reported
Contact:	HARVEY A ROSENZWEIG	Contact Tel:	Not reported
Contact:	NEAL T ROWNDTREE	Contact Tel:	Not reported
Contact:	DENNIS A SADLOWSKI	Contact Tel:	Not reported
Contact:	LAWRENCE SALIBRA	Contact Tel:	Not reported
Contact:	ALEX SAMSON	Contact Tel:	Not reported
Contact:	MARK SAVEDOFF	Contact Tel:	(732) 321-4341
Contact:	MARK SAVEDOFF	Contact Tel:	(908) 321-4341
Contact:	DON SCHIEMANN	Contact Tel:	Not reported
Contact:	JOEL SCHNEIDER	Contact Tel:	Not reported
Contact:	PATRICIA STAVOLA	Contact Tel:	Not reported
Contact:	KEN STROUP	Contact Tel:	Not reported
Contact:	KENNETH E STROUP	Contact Tel:	Not reported
Contact:	KENNETH E STROUPJR	Contact Tel:	Not reported
Contact:	JAMES TAKEMOTO	Contact Tel:	Not reported
Contact:	DANA M TAYLOR	Contact Tel:	Not reported
Contact:	ANEW THOMAS	Contact Tel:	Not reported
Contact:	HELEN TORELLI	Contact Tel:	Not reported
Contact:	CHARLES C VAIL	Contact Tel:	Not reported
Contact:	SHIRLEY WEITZ	Contact Tel:	Not reported
Contact:	JOHN R WELTY	Contact Tel:	Not reported
Contact:	MICHAEL WILCKEN	Contact Tel:	Not reported
Contact:	ALAN ZEDERBERG	Contact Tel:	Not reported

Site Description: BURIED CONTAINERS OF UNKNOWNS EXCAVATED AND STORED ON SITE. BURIED DRUMS REMOVED. IN GRNDWTR & NEARBY SURFACE TRIBUTARY. CONTAMINATED SOILS ARE PRESENT.
BURIED CONTAINERS OF UNKNOWNS EXCAVATED AND STORED ON SITE. BURIED DRUMS REMOVED. IN GRNDWTR & NEARBY SURFACE TRIBUTARY. CONTAMINATED SOILS ARE PRESENT.

CERCLIS Assessment History:

Assessment:	DISCOVERY	Completed:	19791201

CHEMSOL INC SITE - USEPA (Continued) **1000303344**

Assessment:	PRELIMINARY ASSESSMENT	Completed:	19800201
Assessment:	SITE INSPECTION	Completed:	19820801
Assessment:	SITE INSPECTION	Completed:	19820801
Assessment:	HRS PACKAGE	Completed:	19821201
Assessment:	PROPOSAL TO NPL	Completed:	19821230
Assessment:	FINAL LISTING ON NPL	Completed:	19830908
Assessment:	ADMIN ORDER ON CONSENT	Completed:	19840709
Assessment:	RI/FS NEGOTIATIONS	Completed:	19840709
Assessment:	NPL RP SEARCH	Completed:	19890331
Assessment:	REMOVAL ASSESSMENT	Completed:	19900910
Assessment:	PRP RI/FS	Completed:	19900928
Assessment:	RI/FS NEGOTIATIONS	Completed:	19900930
Assessment:	REMOVAL ASSESSMENT	Completed:	19910220
Assessment:	TREATABILITY STUDY	Completed:	19910712
Assessment:	FEASIBILITY STUDY	Completed:	19910920
Assessment:	RECORD OF DECISION	Completed:	19910920
Assessment:	REMOVAL	Completed:	19911029
Assessment:	RD/RA NEGOTIATIONS	Completed:	19920309
Assessment:	UNILATERAL ADMIN ORDER	Completed:	19920309
Assessment:	PRP RD	Completed:	19930517
Assessment:	PRP RA	Completed:	19950321
Assessment:	COMBINED RI/FS	Completed:	19980918
Assessment:	RECORD OF DECISION	Completed:	19980918
Assessment:	FIVE YEAR REMEDY ASSESSMENT	Completed:	19980918

CERCLIS Site Status:
Not reported

CERCLIS Alias Name(s):
CHEMSOL, INC.

NPL:

ID:	02NJ019
Date Listed:	9/08/83 (FINAL)
EPA/ID:	NJD980528889
Haz. Rank Score:	42.69
Status:	LISTED ON NPL
Rank:	380
Group:	8
Ownership:	Private
Permit:	None
Site Activities:	Containers/Drums
Site Activities:	Spill
Site Activities:	Chemical Process/Manuf.
Site Activities:	Landfill, Comm./Indus.
Site Activities:	Waste Piles
Site Condition:	Direct Contact
Site Condition:	Damage of Flora/Fauna
Site Condition:	Contamination of Soil
Site Condition:	Fire or Explosion
Site Condition:	Contam. Ground Water
Waste Type:	Solvents
Waste Form:	Not reported

CHEMSOL INC SITE - USEPA (Continued) **1000303344**

Contaminant:	Media Affected:
BENZENE	Not reported
TOLUENE	Not reported
XYLENE	Not reported
CHLOROFORM	Ground and Surface Water
POLYCHLORINATED BIPHENYLS, NOS	Not reported
TETRACHLOROETHENE	Ground and Surface Water
CARBON TETRACHLORIDE	Ground and Surface Water
1,1,2-TRICHLOROETHYLENE (TCE)	Ground and Surface Water

Distance to nearest Population:	Not reported
Population within a 1 Mile Radius:	Not reported
Population within a 2 Mile Radius:	Not reported
Population within a 4 Mile Radius:	Not reported
Vertical Distance to Aquifer:	Not reported
Ground Water Use:	Used as Drinking Water, Alternative Source not Available
Distance to nearest Surface Water:	Not reported

ROD:
Full-text of USEPA Record of Decision(s) is available from EDR.

CONSENT:
Full-text of a consent decree on this site issued by a United States District Court is available from EDR.

RCRIS:
Owner: TANG REALTY INC
(732) 981-0777

Contact: JAMES HAKLAR
(212) 264-8736

Record Date: 0 :05/1991

Classification: Large Quantity Generator

Used Oil Recyc: No

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Enforcement Docket System (DOCKET)

B8 NNE < 1/8 462 Higher

THERMO NATIONAL INDUSTRIAL INC
3651 SOUTH CLINTON AVE
SOUTH PLAINFIELD, NJ 07080

FINDS 1000298677
RCRIS-LQG NJD002137529
CERC-NFRAP

CERCLIS-NFRAP Classification Data:

Site Incident Category:	Not reported	Federal Facility:	Not a Federal Facility
Ownership Status:	Other	NPL Status:	Not on the NPL

CERCLIS-NFRAP Assessment History:

Assessment:	DISCOVERY	Completed:	19840410
Assessment:	PRELIMINARY ASSESSMENT	Completed:	19841101
Assessment:	SITE INSPECTION	Completed:	19851201

THERMO NATIONAL INDUSTRIAL INC (Continued) **1000298677**

RCRIS:

Owner: THERMO NATIONAL INDUSTRIES INC.
(212) 555-1212

Contact: WILLIAM FOSTER
(908) 561-2212

Record Date: 07/22/1980

Classification: Large Quantity Generator, Small Quantity Generator

Used Oil Recyc: No

Violation Status: Violation information exist

There are 7 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Evaluation Inspection (CEI)	Generator-All Requirements	04/22/1998
	Generator-All Requirements	04/22/1998
	Generator-All Requirements	04/22/1998
	Generator-Land Ban Requirements	04/22/1998
	Generator-All Requirements	04/22/1998
Compliance Schedule Evaluation (CSE)	Generator-All Requirements	06/06/1994
	Generator-All Requirements	06/06/1994
Compliance Evaluation Inspection (CEI)	Generator-All Requirements	06/06/1994
	Generator-All Requirements	06/06/1994

C9 **J & H BERGE INC** **LUST** **S103910773**
SSE **4111 SOUTH CLINTON AVENUE** **N/A**
< 1/8 **SOUTH PLAINFIELD, NJ**
483
Higher

LUST:

Facility ID:	99-08-10-1049-12
Facility Status:	Assigned to a Program
UST ID:	0331968
Lead Program Assigned to Case:	Bureau of Underground Storage Tanks
CSL ID:	Not reported
TMS Number:	N99-0098
Remedial Level:	B
Case Manager:	GS
Web Data Case Manager:	Gary Sanderson

C10 **J & H BEREE INC** **UST** **U003404909**
SSE **4111 S CLINTON AVE** **N/A**
< 1/8 **SOUTH PLAINFIELD, NJ 07080**
483
Higher

J & H BEREE INC (Continued) — **U003404909**

UST:

Facility ID:	0331968	Facility Status:	Active
Install Date:	6/1/82 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	1.00	Owner Tank ID:	0001

Operator:	Not reported
Operator Address:	Not reported
Owner:	J & H BEREE INC
Owner Address:	4111 S CLINTON AVE SOUTH PLAINFIELD, NJ 07080 - 0310
Tank Capacity:	2000.00 Gallons
Tank Contents:	B. Unleaded Gasoline
Tank Construction:	A. BARE STEEL
Tank Structure:	A. Single Wall
Pipe Contents:	A. Bare Steel
Pipe Structure:	A. Single Wall
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	B. Empty less than 12 months
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	12/10/98 0:00:00
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank In Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

C11 — **DM CONNOR & CO** — **UST** — **U003195067**
SE — **4201 S CLINTON AVE** — **N/A**
< 1/8 — **S PLAINFIELD, NJ 07080**
510
Higher

DM CONNOR & CO (Continued) **U003195067**

UST:

Facility ID:	0319403	Facility Status:	Inactive
Install Date:	1/1/59 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	1.00	Owner Tank ID:	0001

Operator:	PETER CONNOR
Operator Address:	Not reported
Owner:	ESTATE OF EDNA CONNOR
Owner Address:	ALAN YAMAMOTO 108 N ALFRED ST - 1ST FL ALEXANDRIA, VA 22314
Tank Capacity:	550.00 Gallons
Tank Contents:	A. Leaded Gasoline
Tank Construction:	A. BARE STEEL
Tank Structure:	A. Single Wall
Pipe Contents:	A. Bare Steel
Pipe Structure:	A. Single Wall
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. Removed
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank In Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

B12 **WARNER JENKINSON COSMETIC COLOR** **RCRIS-SQG** **1001119142**
North **107 WADE AVE** **FINDS** **NJ0001309954**
< 1/8 **SOUTH PLAINFIELD, NJ 07080**
532
Higher

RCRIS:

Owner:	SANTO VSORGE SVS REALTY CO (201) 488-4000
Contact:	RICHARD GRACE (908) 769-3330
Record Date:	07/26/1996
Classification:	Conditionally Exempt Small Quantity Generator
Used Oil Recyc:	No
Violation Status:	No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Permit Compliance System (PCS)

B13 **MITSUBISHI INTERNATIONAL WAREHOUSE** **UST** **U003106115**
NNE **100 WADE AVE** **N/A**
< 1/8 **S PLAINFIELD, NJ 07080**
550
Higher

MITSUBISHI INTERNATIONAL WAREHOUSE (Continued) **U003106115**

UST:

Facility ID:	0306362	Facility Status:	Inactive
Install Date:	1/1/70 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	1.00	Owner Tank ID:	E001

Operator:	Not reported
Operator Address:	Not reported
Owner:	MITSUBISHI INTERNATIONAL WAREHOUSE
Owner Address:	105 STATE ST MOONACHIE, NJ 07074
Tank Capacity:	10000.00 Gallons
Tank Contents:	H. Home Heating Oil (No. 2)
Tank Construction:	A. BARE STEEL
Tank Structure:	A. Single Wall
Pipe Contents:	A. Bare Steel
Pipe Structure:	A. Single Wall
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

B14 NNE < 1/8 550 Higher **ROLLER CORP OF AMERICA** **FINDS 1000280315**
3601 S CLINTON AVE **RCRIS-LQG NJD002146710**
SOUTH PLAINFIELD, NJ 07080

RCRIS:

Owner:	MONETT EDWARD (212) 555-1212
Contact:	EDWARD MONETT (908) 757-7330
Record Date:	08/18/1986
Classification:	Large Quantity Generator
Used Oil Recyc:	No
Violation Status:	No violations found

B15 NNE < 1/8 550 Higher **DEGUSSA CORP METAL GROUP** **FINDS 1000708466**
3601 S CLINTON AVE **RCRIS-LQG NJD982281487**
SOUTH PLAINFIEL, NJ 07080

DEGUSSA CORP METAL GROUP (Continued) **1000708466**

RCRIS:
Owner: DEGUSSA CORP
(201) 641-6100

Contact: C SCOTT EVES
(908) 561-1100

Record Date: 10/30/1991

Classification: Large Quantity Generator, Small Quantity Generator, TSDF

Used Oil Recyc: No

TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Permit Compliance System (PCS)

D16 **4201 CLINTON AVENUE SOUTH; CONNOR ESTATE** **LUST** **S103091716**
SSE **4201 S CLINTON AVE** **N/A**
1/8-1/4 **SOUTH PLAINFIELD, NJ**
717
Higher

LUST:

Facility ID:	95-12-04-1433-07
Facility Status:	Assigned to a Program
UST ID:	0319403
Lead Program Assigned to Case:	Bureau of Underground Storage Tanks
CSL ID:	Not reported
TMS Number:	C97-0665
Remecdial Level:	C2
Case Manager:	JAY
Web Data Case Manager:	Jay Basavanhally

E17 **TRANS AMERICAN TRUCKING SVC INC** **RCRIS-SQG** **1000318845**
SE **115 ST NICHOLAS AVE** **FINDS** **NJD154118343**
1/8-1/4 **SOUTH PLAINFIELD, NJ 07080**
725
Higher

RCRIS:
Owner: RON MCGRAW PRESIDENT
(212) 555-1212

Contact: JIM SKOW
(908) 755-9000

Record Date: 08/04/1987

Classification: Hazardous Waste Transporter

TRANS AMERICAN TRUCKING SVC INC (Continued) — **1000318845**

Used Oil Recyc: No

Violation Status: No violations found

E18 SE 1/8-1/4 784 Higher

A J JERSEY INC
125 ST NICHOLAS AVE
SOUTH PLAINFIELD, NJ 07080

RCRIS-SQG — **1001197168**
FINDS — **NJR000019950**

RCRIS:

Owner: A J JERSEY INC
(908) 754-7333

Contact: DAVID RIZZO
(908) 754-7333

Record Date: 06/10/1997

Classification: Small Quantity Generator

Used Oil Recyc: No

Violation Status: No violations found

E19 SE 1/8-1/4 799 Higher

JESCO INC
118 ST NICHOLAS AVE
SOUTH PLAINFIEL, NJ 07080

FINDS — **1000176397**
RCRIS-LQG — **NJD063175509**
UST

RCRIS:

Owner: LOUIS ROBUSTELLI
(212) 555-1212

Contact: LEN LEVITZ
(908) 753-8080

Record Date: 05/08/1987

Classification: Large Quantity Generator

Used Oil Recyc: No

Violation Status: No violations found

JESCO INC (Continued) **1000176397**

UST:

Facility ID:	0231905	Facility Status:	Inactive
Install Date:	1/1/44 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	2.00	Owner Tank ID:	E2

Operator:	Not reported
Operator Address:	Not reported
Owner:	JESCO INC
Owner Address:	118 ST NICHOLAS AVENUE SOUTH PLAINFIELD, NJ 07080
Tank Capacity:	5000.00 Gallons
Tank Contents:	B. UNLEADED GASOLINE
Tank Construction:	A. BARE STEEL H. OTHER: NOT REPORTED
Tank Structure:	A. SINGLE WALL C. OTHER: NOT REPORTED
Pipe Contents:	H. OTHER: NOT REPORTED H. OTHER: NOT REPORTED
Pipe Structure:	A. SINGLE WALL C. OTHER: NOT REPORTED
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED 7/92 C92-0045
Date Tank Removed:	Not reported
Date Tank Abandoned In Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0231905	Facility Status:	Inactive
Install Date:	1/1/44 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	4.00	Owner Tank ID:	E4

Operator:	Not reported
Operator Address:	Not reported
Owner:	JESCO INC
Owner Address:	118 ST NICHOLAS AVENUE SOUTH PLAINFIELD, NJ 07080
Tank Capacity:	500.00 Gallons
Tank Contents:	F. WASTE OIL
Tank Construction:	A. BARE STEEL H. OTHER: NOT REPORTED
Tank Structure:	A. SINGLE WALL C. OTHER: NOT REPORTED
Pipe Contents:	H. OTHER: NOT REPORTED H. OTHER: NOT REPORTED
Pipe Structure:	A. SINGLE WALL C. OTHER: NOT REPORTED
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED 7/92 C92-0046
Date Tank Removed:	Not reported
Date Tank Abandoned In Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

JESCO INC (Continued) **1000176397**

Facility ID:	0231905	Facility Status:	Inactive
Install Date:	1/1/85 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	1.00	Owner Tank ID:	E1

Operator: Not reported
Operator Address: Not reported
Owner: JESCO INC
Owner Address: 118 ST NICHOLAS AVENUE
SOUTH PLAINFIELD, NJ 07080
Tank Capacity: 5000.00 Gallons
Tank Contents: E. MEDIUM DIESEL FUEL (NO. 2-D)
Tank Construction: A. BARE STEEL H. OTHER: NOT REPORTED
Tank Structure: A. SINGLE WALL C. OTHER: NOT REPORTED
Pipe Contents: H. OTHER: NOT REPORTED H. OTHER: NOT REPORTED
Pipe Structure: A. SINGLE WALL C. OTHER: NOT REPORTED
Over Fill Products: No
Spill Containment Around Fill Pipe: No
Tank Status: G. REMOVED 7/92 C92-0045
Date Tank Removed: Not reported
Date Tank Abandoned In Place: Not reported
Date Tank Taken Out of Service: Not reported
Date of Tank Sale or Transfer: Not reported
Tank Closure Number: Not reported
Tank ISRA Number: Not reported
Tank in Wellhead Protection Area: Not reported
Is Facility in Compliance Rules: 0

Facility ID:	0231905	Facility Status:	Inactive
Install Date:	1/1/44 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	3.00	Owner Tank ID:	E3

Operator: Not reported
Operator Address: Not reported
Owner: JESCO INC
Owner Address: 118 ST NICHOLAS AVENUE
SOUTH PLAINFIELD, NJ 07080
Tank Capacity: 2000.00 Gallons
Tank Contents: F. WASTE OIL
Tank Construction: A. BARE STEEL H. OTHER: NOT REPORTED
Tank Structure: A. SINGLE WALL C. OTHER: NOT REPORTED
Pipe Contents: H. OTHER: NOT REPORTED H. OTHER: NOT REPORTED
Pipe Structure: A. SINGLE WALL C. OTHER: NOT REPORTED
Over Fill Products: No
Spill Containment Around Fill Pipe: No
Tank Status: G. REMOVED 7/92 C92-0046
Date Tank Removed: Not reported
Date Tank Abandoned In Place: Not reported
Date Tank Taken Out of Service: Not reported
Date of Tank Sale or Transfer: Not reported
Tank Closure Number: Not reported
Tank ISRA Number: Not reported
Tank in Wellhead Protection Area: Not reported
Is Facility in Compliance Rules: 0

D20 **4201 CLINTON AVENUE SOUTH** **SHWS** **S103031220**
SSE **4201 CLINTON AVE S** **N/A**
1/8-1/4 **SOUTH PLAINFIELD BOROUGH, NJ**
828
Higher

4201 CLINTON AVENUE SOUTH (Continued) **S103031220**

SHWS:
Facility ID: NJL800190118 Case ID: 951204143307
Case Status: ACTIVE Status Date: 02/25/1997
Contact: BUST
Facility Status: OPEN
CEA/DER: Not reported

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21 North 1/8-1/4 938 Higher

L & R METAL TREATING COMPANY
3651 CLINTON AVE
SOUTH PLAINFIELD BOROUGH, NJ

SHWS **1000540582** **N/A**

SHWS:
Facility ID: NJD980770200 Case ID: 950201
Case Status: PENDING Status Date: 02/02/1995
Contact: BEECRA
Facility Status: OPEN
CEA/DER: Not reported

Facility ID: NJD980770200 Case ID: 950927174414
Case Status: ACTIVE Status Date: 11/09/1995
Contact: BFO-S
Facility Status: OPEN
CEA/DER: Not reported

F22 South 1/8-1/4 982 Higher

J ALGOT JOHNSON
88 TYLER PL
SOUTH PLAINFIEL, NJ 07080

RCRIS-SQG **1000140917**
FINDS **NJD980526925**

RCRIS:
Owner: J ALGOT JOHNSON C/O C JOHNSON
(732) 752-4317

Contact: CHARLES JOHNSON
(732) 752-4317

Record Date: 10/29/1993

Classification: Small Quantity Generator

Used Oil Recyc: No

Violation Status: No violations found

F23 South 1/8-1/4 982 Higher

ULTRAKLEEN CO
88 TYLER PL
SOUTH PLAINFIELD, NJ 07080

FINDS **1000353312**
RCRIS-LQG **NJD980534341**

ULTRAKLEEN CO (Continued) **1000353312**

RCRIS:
Owner: Not reported
Contact: DOUGLAS TAYLOR
(908) 756-7020
Record Date: 01/13/1982
Classification: Large Quantity Generator
Used Oil Recyc: No
Violation Status: No violations found

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24 South 1/8-1/4 1006 Higher

MCGRATH EQUIPMENT CO.
70 TYLER PLACE
SOUTH PLAINFIEL, NJ 07080

RCRIS-SQG 1000353853
FINDS NJD047507603
UST

RCRIS:
Owner: Not reported
Contact: Not reported
Record Date: 12/31/1979
Classification: Not reported
Used Oil Recyc: No
Violation Status: Violation information exist

There are 2 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Evaluation Inspection (CEI)	Generator-All Requirements	07/06/1987
	Generator-All Requirements	07/06/1987

MCGRATH EQUIPMENT CO. (Continued) **1000353853**

UST:

Facility ID:	0035778	Facility Status:	Inactive
Install Date:	1/1/79 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	1.00	Owner Tank ID:	0001

Operator:	Not reported
Operator Address:	Not reported
Owner:	FRANCIS J MCGRATH
Owner Address:	70 TYLER PLACE SOUTH PLAINFIELD, NJ 07080
Tank Capacity:	4000.00 Gallons
Tank Contents:	A. LEADED GASOLINE
Tank Construction:	A. BARE STEEL
Tank Structure:	A. SINGLE WALL
Pipe Contents:	A. BARE STEEL
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	6
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED PENDING
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

F25
South
1/8-1/4
1010
Higher

BYRAM CRUSHED STONE CORPO **MINES** **M000068770**
N/A

MIDDLESEX (County), NJ

U.S. MINES:

Mine ID:	2800670	SIC Codes:	14410 00000 00000 00000 00000 00000
Entity Name:	BYRAM CRUSHED STONE	Company:	BYRAM CRUSHED STONE CORPO
State FIPS code:	34	County FIPS code:	037
Status Date:	03/21/1997	Status:	Intermittent
Operation Class:	Non-coal mining	Number of Shops:	8
Number of Pits:	000	Number of Plants:	0
Latitude:	40 33 42	Longitude:	074 25 48

26
ENE
1/8-1/4
1014
Higher

FERRO CORPORATION
115 SKYLINE DRIVE
SOUTH PLAIN FIELD, NJ 07080

CERCLIS **1000365631**
RCRIS-SQG **NJD041814005**
FINDS
NJ Spills
NJ Release

CERCLIS Classification Data:

Site Incident Category:	Not reported	Federal Facility:	Not a Federal Facility
Ownership Status:	Unknown	NPL Status:	Not on the NPL
Contact:	MICHELE BRICE-ROBINSON	Contact Tel:	(212) 637-3300
Contact:	BOBBY DEASE	Contact Tel:	(732) 906-6893
Contact:	EUGENE DOMINACH	Contact Tel:	(908) 321-6666
Contact:	HONORA DROHAN	Contact Tel:	(212) 637-4355
Contact:	GLADYS LEYNES	Contact Tel:	(212) 637-3301
Contact:	MARK SAVEDOFF	Contact Tel:	(732) 321-4341

FERRO CORPORATION (Continued) 1000365631

Contact: MARK SAVEDOFF Contact Tel: (908) 321-4341
CERCLIS Assessment History:
Assessment: DISCOVERY Completed: 19890606
Assessment: PRELIMINARY ASSESSMENT Completed: 19890918
CERCLIS Site Status:
Deferred to RCRA (Subtitle C) or NRC
CERCLIS Alias Name(s):
FERRO CORPORATION

RCRIS:
Owner: FERRO CORP
(216) 641-8580

Contact: JOSEPH SEMANCIK
(908) 756-1225

Record Date: 03/04/1997

Classification: Conditionally Exempt Small Quantity Generator

Used Oil Recyc: No

Violation Status: Violation information exist

There are 2 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Schedule Evaluation (CSE)	Generator-All Requirements	07/14/1992
	Generator-All Requirements	07/14/1992
Compliance Evaluation Inspection (CEI)	Generator-All Requirements	07/14/1992
	Generator-All Requirements	07/14/1992

FINDS:
Other Pertinent Environmental Activity Identified at Site:
AIRS Facility System (AIRS/AFS)
Permit Compliance System (PCS)
Section Seven Tracking System (SSTS)

NJ Release:

Facility ID:	3268	Case Number:	93-3-5-1037-19
Date Received:	03/05/1993	Operator:	RICH
Location:	Facility	Nature of Incident:	Other
Facility Phone:	908-756-1225	Facility Type:	Industrial
Date of Incident:	03/04/1993	Time of Incident:	15:00
Substance(s):	WASTE PAINT AND SOLVENTS PAINT, OIL-BASED		
Substance Type:	Liquid	Substance Identity:	Known
A310 Letter:	Yes	TCPA Chemical:	No
Hazrds Material:	Yes	CAS Number:	Not reported
COMU:	1222	Ref. Code:	002
Amnt Released:	500 LBS	Release VE:	Estimate
Release Type:	Terminated	Contained:	No
Injuries:	No	Facility Evacuation:	No
Public Exposure:	Yes	Public Evacuation:	No
Police at Scene:	No	Firemen at Scene:	No
Contamination of:	Land,WATER	Receiving Water:	UNK
Caller:			
Name:	ANONYMOUS	Title:	Not reported
Address:	Not reported		
Telephone:	Not reported		

FERRO CORPORATION (Continued) 1000365631

Responsible Party:

Name:	Known	Company:	FERRO CORP
Contact:	JOE SENANCIK	Title:	MANAGER
Address:	115 SKYLINE DR SOUTH PLAINFIELD, NJ		
County:	MIDDLESEX	Telephone:	908-756-1225

NJ Spill:

Name:	Not reported	Title:	Not reported
Telephone:	Not reported		
Date:	Not reported	Time:	Not reported

Local Municipality:

Name:	SOUTH PLAINFIELD B	Municipality Title:	OPER 4876
Telephone:	908-755-0700		
Date:	03/05/1993	Time:	10:44

Other:

Name:	Not reported	Title:	Not reported
Telephone:	Not reported		
Date:	Not reported	Time:	Not reported

Incident:

Name:	ROB SCHRADER	Referred To:	DRPSR
Region:	ER2	Telephone:	Office,Faxed
Date:	03/05/1993	Incident Time:	10:44
ITM:	B		

Incident Description:	Illegal Dumping
Wind Direction/Speed:	Not reported
Assistance Requested:	No
Date A310 Letter Printed:	Not reported
Date Local Authority Was Notified:	Not reported
Date Update:	Not reported
Date Report Faxed to Local Authority:	Not reported
Local Authority Notification Date 1:	Not reported
Local Authority Notification Date 2:	Not reported
Local Authority Notification Date 3:	Not reported
Status at Spill:	ADMIRAL TRUCKING DRIVER WASHED OUT TRUCK AFTER A SPILL AND MATERIAL WENT INTO DRAINS AND IS ALL OVER PARKING LOT
Comments:	Not reported

NJ Spill:

Facility ID:	3268	Case Number:	93-3-5-1037-19
Date Received:	03/05/1993	Operator:	RICH
Location:	Facility	Nature of Incident:	Other
Facility Phone:	908-756-1225	Facility Type:	Industrial
Date of Incident:	03/04/1993	Time of Incident:	15:00
Substance(s):	WASTE PAINT AND SOLVENTS PAINT, OIL-BASED		
Substance Type:	Liquid	Substance Identity:	Known
A310 Letter:	Yes	TCPA Chemical:	No
Hazrds Material:	Yes	CAS Number:	Not reported
COMU:	1222	Ref. Code:	002
Amnt Released:	500 LBS	Release VE:	Estimate
Release Type:	Terminated	Contained:	No
Injuries:	No	Facility Evacuation:	No
Public Exposure:	Yes	Public Evacuation:	No
Police at Scene:	No	Firemen at Scene:	No
Contamination of:	Land,WATER	Receiving Water:	UNK

Caller:

Name:	ANONYMOUS	Title:	Not reported
Address:	Not reported		

FERRO CORPORATION (Continued) **1000365631**

Phone: Not reported
Responsible Party:
Name: Known
Contact: JOE SENANCIK
Address: 115 SKYLINE DR
SOUTH PLAINFIELD, NJ
County: MIDDLESEX
Company: FERRO CORP
Title: MANAGER
Phone: 908-756-1225
NJ Spill:
Name: Not reported
Title: Not reported
Phone: Not reported
Date: Not reported
Time: Not reported
Local Municipality:
Name: SOUTH PLAINFIELD B
Title: OPER 4876
Phone: 908-755-0700
Date: 03/05/1993
Time: 10:44
Other:
Name: Not reported
Title: Not reported
Phone: Not reported
Date: Not reported
Time: Not reported
Incident:
Name: ROB SCHRADER
Referred To: DRPSR
Region: ER2
Telephone: Office,Faxed
Date: 03/05/1993
Incident Time: 10:44
ITM: B
Incident Description: Illegal Dumping
Wind Direction/Speed: Not reported
Assistance Requested: No
Date A310 Letter Printed: Not reported
Date Local Authority Was Notified: Not reported
Date Update: Not reported
Date Report Faxed to Local Authority: Not reported
Local Authority Notification Date 1: Not reported
Local Authority Notification Date 2: Not reported
Local Authority Notification Date 3: Not reported
Status at Spill: ADMIRAL TRUCKING DRIVER WASHED OUT TRUCK AFTER A SPILL AND MATERIAL WENT INTO DRAINS AND IS ALL OVER PARKING LOT
Comments: Not reported

G27 SSE 1/8-1/4 1017 Higher

PLATINA REFINING LABORATORIES ECRA CLEAN
4301 S CLINTON AVE
SOUTH PLAINFIELD, NJ 07080

FINDS **1000412355**
RCRIS-LQG **NJD986609477**
MLTS
CERC-NFRAP
SHWS

CERCLIS-NFRAP Classification Data:
Site Incident Category: Not reported
Ownership Status: Other
Federal Facility: Not a Federal Facility
NPL Status: Not on the NPL
CERCLIS-NFRAP Assessment History:

Assessment:	DISCOVERY	Completed:	19790301
Assessment:	PRELIMINARY ASSESSMENT	Completed:	19800601
Assessment:	PRELIMINARY ASSESSMENT	Completed:	19890522
Assessment:	SITE INSPECTION	Completed:	19910627

PLATINA REFINING LABORATORIES ECRA CLEAN (Continued) **1000412355**

RCRIS:
Owner: PLATINA FEFINING LABORATORIES
(908) 766-3063

Contact: JAMES GRASSO
(908) 766-3063

Record Date: 05/09/1991

Classification: Large Quantity Generator

Used Oil Recyc: No

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
AIRS Facility System (AIRS/AFS)

SHWS:
Facility ID: NJD063140396
Case Status: ACTIVE
Contact: BEECRA
Facilty Status: OPEN
CEA/DER: Not reported
Case ID: E91192
Status Date: 09/16/1991

G28
SSE
1/8-1/4
1017
Higher

ZERO HOUR CORP THE
4300 S CLINTON AVE
SOUTH PLAINFIEL, NJ 07080

FINDS **1000137141**
RCRIS-LQG **NJD980787915**

RCRIS:
Owner: Not reported

Contact: ALBERT WITCHER
(908) 754-8383

Record Date: 03/05/1985

Classification: Large Quantity Generator

Used Oil Recyc: No

Violation Status: No violations found

H29
ENE
1/8-1/4
1035
Higher

THERMA PLATE CORP
111 SKYLINE DR
SOUTH PLAINFIEL, NJ 07080

RCRIS-SQG **1000785361**
FINDS **NJD986638419**
SHWS

THERMA PLATE CORP (Continued) **1000785361**

RCRIS:
Owner: EDGAR OTTO
(908) 561-8111
Contact: WILLIAM SCHWALJE
(908) 561-8111
Record Date: 07/03/1992
Classification: Conditionally Exempt Small Quantity Generator
Used Oil Recyc: No
Violation Status: No violations found

SHWS:
Facility ID: NJD986638419
Case Status: ACTIVE
Contact: BEECRA
Facilty Status: OPEN
CEA/DER: Not reported
Case ID: E95005
Status Date: 01/13/1997

G30 SSE 1/8-1/4 1040 Higher

P K MEILKE INC
105 TYLER PL
SOUTH PLAINFIEL, NJ 07080

FINDS **1000297339**
RCRIS-LQG **NJD982743502**

RCRIS:
Owner: JANE MEILKE
(212) 555-1212
Contact: JANE MEILKE
(732) 356-6604
Record Date: 07/14/1989
Classification: Large Quantity Generator
Used Oil Recyc: No
Violation Status: No violations found

H31 ENE 1/8-1/4 1064 Higher

SAFETY KLEEN CORP SOUTH PLAINFIELD
SKYLINE DR
SOUTH PLAINFIELD, NJ 07080

FINDS **1000224261**
RCRIS-LQG **NJD982270506**
RCRIS-TSD
CORRACTS

CORRACTS Data:
Prioritization: Low
Status: RCRA Facility Assessment Completed

RCRIS Corrective Action Summary:
Effective Date: 11/07/1988
Legal Authority: RCRA 3004(u) or equivalent

SAFETY KLEEN CORP SOUTH PLAINFIELD (Continued) **1000224261**

RCRIS:
Owner: SAFETY KLEEN SYSTEMS INC
(803) 933-4393

Contact: ANTHONY CONSALVO
(908) 791-9600

Record Date: 07/10/1998

Classification: Large Quantity Generator, Small Quantity Generator, TSDF, Hazardous Waste Transporter

BIENNIAL REPORTS:
Last Biennial Reporting Year: 1997

Waste	Quantity (Lbs)	Waste	Quantity (Lbs)
D001	712075.70	D006	711945.70
D007	115.00	D008	712075.70
D018	698557.70	D022	15.00
D027	698427.70	D028	15.00
D035	130.00	D039	712075.70
D040	698557.70	F003	130.00
F005	130.00		

Used Oil Recyc: No

TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Permit Compliance System (PCS)

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32 SSE 1/8-1/4 1301 Higher | **EASTERN RAILROAD EQUIPMENT CORP**
4400 S CLINTON AVE
S PLAINFIELD, NJ 07080 | **UST** | **U000355677**
N/A

EASTERN RAILROAD EQUIPMENT CORP (Continued) **U000355677**

UST:

Facility ID:	0043986	Facility Status:	Inactive
Install Date:	1/1/67 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	1.00	Owner Tank ID:	C2

Operator:	Not reported
Operator Address:	Not reported
Owner:	EASTERN RAILROAD EQUIPMENT CORP.
Owner Address:	4400 S CLINTON AVE MIDDLESEX, NJ 07080
Tank Capacity:	0.00 Gallons
Tank Contents:	D. LIGHT DIESEL FUEL (NO. 1-D)
Tank Construction:	A. BARE STEEL
Tank Structure:	A. SINGLE WALL
Pipe Contents:	A. BARE STEEL
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0043986	Facility Status:	Inactive
Install Date:	1/1/77 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	2.00	Owner Tank ID:	E1

Operator:	Not reported
Operator Address:	Not reported
Owner:	EASTERN RAILROAD EQUIPMENT CORP.
Owner Address:	4400 S CLINTON AVE MIDDLESEX, NJ 07080
Tank Capacity:	0.00 Gallons
Tank Contents:	A. LEADED GASOLINE
Tank Construction:	A. BARE STEEL
Tank Structure:	A. SINGLE WALL
Pipe Contents:	A. BARE STEEL
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

I33 **N B S CARD SERVICES INC** **RCRIS-SQG** **1000118599**
ENE **800 MONTROSE AVE** **FINDS** **NJD981872054**
1/8-1/4 **SOUTH PLAINFIEL, NJ 07080**
1309
Higher

N B S CARD SERVICES INC (Continued) **1000118599**

RCRIS:
Owner: SBN SYSTEMS INC
(212) 555-1212

Contact: EDWIN CHUDKOWSKI
(908) 668-0999

Record Date: 12/15/1986

Classification: Small Quantity Generator

Used Oil Recyc: No

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Permit Compliance System (PCS)

I34
ENE
1/8-1/4
1309
Higher

BH&P INC. (AKA ECONOMICS LABORATORY)
800 MONTROSE AVENUE
SOUTH PLAINFIELD, NJ 07080

CERC-NFRAP 1000344537
NJD106535701

CERCLIS-NFRAP Classification Data:
Site Incident Category: Not reported
Federal Facility: Not a Federal Facility
Ownership Status: Other
NPL Status: Not on the NPL
Site Description: SPILLS AND ILLEGAL DISPOSAL HAVE RESULTED IN AREAS OF CONTAMINATION ON-SITE. THESE AREAS HAVE BEEN REMEDIATED TO LOW LEVELS. CONTAMINANTS INCLUDE METHYLETHYL KETONE, TOLUENE, AND BIS-ETHYLHEXYL PHTHALATE. TOLUENE-CONTAMINATED RAINWATER
SPILLS AND ILLEGAL DISPOSAL HAVE RESULTED IN AREAS OF CONTAMINATION ON-SITE. THESE AREAS HAVE BEEN REMEDIATED TO LOW LEVELS. CONTAMINANTS INCLUDE METHYLETHYL KETONE, TOLUENE, AND BIS-ETHYLHEXYL PHTHALATE. TOLUENE-CONTAMINATED RAINWATER

CERCLIS-NFRAP Assessment History:

Assessment:	DISCOVERY	Completed:	19860201
Assessment:	PRELIMINARY ASSESSMENT	Completed:	19860220
Assessment:	SITE INSPECTION	Completed:	19900621

I35
ENE
1/8-1/4
1309
Higher

ECONOMICS LABORATORY INC
800 MONTROSE AVE
SOUTH PLAINFIELD, NJ 07080

FINDS 1000318327
RCRIS-LQG NJD000818591

ECONOMICS LABORATORY INC (Continued) — **1000318327**

RCRIS:
Owner: ECONOMICS LABORATORY INC
(212) 555-1212
Contact: DAVID L CHARZEWSKI
(612) 451-5713
Record Date: 08/18/1980
Classification: Large Quantity Generator
Used Oil Recyc: No
Violation Status: No violations found

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36 WSW 1/4-1/2 1457 Higher

EASTERN STEEL BARREL CORP
4100 N BRUNSWICK AVE
PISCATAWAY, NJ

LUST — **S101995679** / **N/A**

LUST:

Facility ID:	92-11-20-1415
Facility Status:	Not reported
UST ID:	0059132
Lead Program Assigned to Case:	ECRA
CSL ID:	Not reported
TMS Number:	Not reported
Remecdial Level:	Not reported
Case Manager:	Not reported
Web Data Case Manager:	Not reported

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37 ENE 1/4-1/2 1488 Higher

TEVCO, INC.
690 MONTROSE AVE
SOUTH PLAINFIELD, NJ 07080

FINDS **RCRIS-LQG** **SHWS** — **1000178288** / **NJD002010635**

RCRIS:
Owner: SNPE
(212) 555-1212
Contact: A KAHAMIS DR
(908) 754-7305
Record Date: 03/31/1981
Classification: Large Quantity Generator, Hazardous Waste Transporter
Used Oil Recyc: No
Violation Status: Violation information exist

There are 4 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Schedule Evaluation (CSE)	Formal Enforcement Agreement	11/16/1989

TEVCO, INC. (Continued) **1000178288**

Compliance Evaluation Inspection (CEI)	Generator-All Requirements	11/27/1989
Compliance Evaluation Inspection (CEI)	Generator-All Requirements	01/17/1986
	Generator-All Requirements	

FINDS:
Other Pertinent Environmental Activity Identified at Site:
National Compliance Database (NCDB)

SHWS:
Facility ID: NJD002010635
Case Status: ACTIVE
Contact: BEECRA
Facility Status: OPEN
CEA/DER: Not reported
Case ID: E87633
Status Date: 07/27/1992

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38 WSW 1/4-1/2 1647 Higher

ARKO PAPER PRODUCTS CO INC
4100 NEW BRUNSWICK AVE
PISCATAWAY, NJ 08854

RCRIS-SQG FINDS UST SHWS **1000402112 NJD002144525**

RCRIS:
Owner: ANTHONY R KOLENSKI JR
(732) 424-2100

Contact: MIKE SHINKLE
(732) 424-2100

Record Date: 02/02/1994

Classification: Small Quantity Generator

Used Oil Recyc: No

Violation Status: No violations found

NY MANIFEST
Additional detail is available in NY MANIFEST. Please contact your EDR Account Executive for more information.

FINDS:
Other Pertinent Environmental Activity Identified at Site:
AIRS Facility System (AIRS/AFS)

SHWS:
Facility ID: NJD002144525
Case Status: NFA-E
Contact: BEECRA
Facility Status: CLOSED
CEA/DER: Not reported
Case ID: E91081
Status Date: 02/28/1997

ARKO PAPER PRODUCTS CO INC (Continued) **1000402112**

UST:

Facility ID:	0059132	Facility Status:	Inactive
Install Date:	1/1/67 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	1.00	Owner Tank ID:	E1

Operator:	Not reported
Operator Address:	Not reported
Owner:	EASTERN STEEL BARREL CORPORATION
Owner Address:	10 JOHNSON DRIVE ATTN. ANDREW H. CAMPBELL RARITAN, NJ 08869
Tank Capacity:	10000.00 Gallons
Tank Contents:	H. HOME HEATING OIL (NO. 2)
Tank Construction:	B. CATHODICALLY PROTECTED STEEL
Tank Structure:	A. SINGLE WALL A. SINGLE WALL
Pipe Contents:	A. BARE STEEL
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	91081
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0059132	Facility Status:	Inactive
Install Date:	1/1/83 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	2.00	Owner Tank ID:	E2

Operator:	Not reported
Operator Address:	Not reported
Owner:	EASTERN STEEL BARREL CORPORATION
Owner Address:	10 JOHNSON DRIVE ATTN. ANDREW H. CAMPBELL RARITAN, NJ 08869
Tank Capacity:	8000.00 Gallons
Tank Contents:	E. MEDIUM DIESEL FUEL (NO. 2-D)
Tank Construction:	B. CATHODICALLY PROTECTED STEEL
Tank Structure:	A. SINGLE WALL A. SINGLE WALL
Pipe Contents:	A. BARE STEEL
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	91081
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
J39 ESE 1/4-1/2 1768 Higher	SNYDER FOUNDATION INC 4201 KENNEDY RD SOUTH PLAINFIELD, NJ	NJ Spills NJ Release SHWS	S101995832 N/A

SHWS:

Facility ID:	NJL800156713	Case ID:	950705102634
Case Status:	ACTIVE	Status Date:	07/10/1997
Contact:	BUST		
Facility Status:	OPEN		
CEA/DER:	Not reported		

NJ Release:

Facility ID:	10283	Case Number:	95-7-5-1026-34
Date Received:	07/05/1995	Operator:	JIMH
Location:	Facility	Nature of Incident:	Other
Facility Phone:	Not reported	Facility Type:	Commercial
Date of Incident:	07/05/1995	Time of Incident:	Not reported
Substance(s):	BENZENE		
Substance Type:	Liquid	Substance Identity:	Known
A310 Letter:	Yes	TCPA Chemical:	No
Hazrds Material:	Yes	CAS Number:	71432
COMU:	1222	Ref. Code:	101
Amnt Released:	UNK	Release VE:	Not reported
Release Type:	Terminated	Contained:	No
Injuries:	No	Facility Evacuation:	No
Public Exposure:	No	Public Evacuation:	No
Police at Scene:	No	Firemen at Scene:	No
Contamination of:	Land	Receiving Water:	Not reported
Caller:			
Name:	PAUL ZELENTY	Title:	ATTY
Address:	Not reported		
Telephone:	201-292-1700		
Responsible Party:			
Name:	Known	Company:	SNYDER FOUNDATION IN
Contact:	SNYDERS	Title:	OWNERS
Address:	4201 KENNEDY RD SOUTH PLAINFIELD, NJ		
County:	MIDDLESEX	Telephone:	Not reported
NJ Spill:			
Name:	Not reported	Title:	Not reported
Telephone:	Not reported		
Date:	Not reported	Time:	Not reported
Local Municipality:			
Name:	SOUTH PLAINFIELD B	Municipality Title:	OPER 2537
Telephone:	908-755-0700		
Date:	07/05/1995	Time:	10:33
Other:			
Name:	Not reported	Title:	Not reported
Telephone:	Not reported		
Date:	Not reported	Time:	Not reported
Incident:			
Name:	Not reported	Referred To:	DRPSR
Region:	BFO-CAS	Telephone:	Faxed,Mailed
Date:	07/05/1995	Incident Time:	Not reported
ITM:	B		

Incident Description:	Groundwater Cont.
Wind Direction/Speed:	Not reported
Assistance Requested:	No

SNYDER FOUNDATION INC (Continued) S101995832

Date A310 Letter Printed: Not reported
Date Local Authority Was Notified: Not reported
Date Update: Not reported
Date Report Faxed to Local Authority: Not reported
Local Authority Notification Date 1: Not reported
Local Authority Notification Date 2: Not reported
Local Authority Notification Date 3: Not reported
Status at Spill: BUYER HAD TEST OF PROPERTY AND FOUND SOME CONTAMINATION. TANKS WHERE REMOVED IN 80'S POSSIBLE CAUSE
Comments: CHART H

NJ Spill:

Facility ID:	10283	Case Number:	95-7-5-1026-34
Date Received:	07/05/1995	Operator:	JIMH
Location:	Facility	Nature of Incident:	Other
Facility Phone:	Not reported	Facility Type:	Commercial
Date of Incident:	07/05/1995	Time of Incident:	Not reported
Substance(s):	BENZENE		
Substance Type:	Liquid	Substance Identity:	Known
A310 Letter:	Yes	TCPA Chemical:	No
Hazrds Material:	Yes	CAS Number:	71432
COMU:	1222	Ref. Code:	101
Amnt Released:	UNK	Release VE:	Not reported
Release Type:	Terminated	Contained:	No
Injuries:	No	Facility Evacuation:	No
Public Exposure:	No	Public Evacuation:	No
Police at Scene:	No	Firemen at Scene:	No
Contamination of:	Land	Receiving Water:	Not reported

Caller:

Name:	PAUL ZELENTY	Title:	ATTY
Address:	Not reported		
Phone:	201-292-1700		

Responsible Party:

Name:	Known	Company:	SNYDER FOUNDATION IN
Contact:	SNYDERS	Title:	OWNERS
Address:	4201 KENNEDY RD SOUTH PLAINFIELD, NJ		
County:	MIDDLESEX	Phone:	Not reported

NJ Spill:

Name:	Not reported	Title:	Not reported
Phone:	Not reported		
Date:	Not reported	Time:	Not reported

Local Municipality:

Name:	SOUTH PLAINFIELD B	Title:	OPER 2537
Phone:	908-755-0700		
Date:	07/05/1995	Time:	10:33

Other:

Name:	Not reported	Title:	Not reported
Phone:	Not reported		
Date:	Not reported	Time:	Not reported

Incident:

Name:	Not reported	Referred To:	DRPSR
Region:	BFO-CAS	Telephone:	Faxed,Mailed
Date:	07/05/1995	Incident Time:	Not reported
ITM:	B		

Incident Description: Groundwater Cont.
Wind Direction/Speed: Not reported
Assistance Requested: No

SNYDER FOUNDATION INC (Continued) **S101995832**

Date A310 Letter Printed: Not reported
Date Local Authority Was Notified: Not reported
Date Update: Not reported
Date Report Faxed to Local Authority: Not reported
Local Authority Notification Date 1: Not reported
Local Authority Notification Date 2: Not reported
Local Authority Notification Date 3: Not reported
Status at Spill: BUYER HAD TEST OF PROPERTY AND FOUND SOME CONTAMINATION. TANKS WHERE REMOVED IN 80'S POSSIBLE CAUSE
Comments: CHART H

J40 ESE 1/4-1/2 1777 Higher

SNYDER FOUNDATION INCORPORATED
4201 KENNEDY RD
SOUTH PLAINFIELD, NJ

LUST **S103091731** **N/A**

LUST:
Facility ID: 95-07-05-1026-34
Facility Status: Site Issued Letter of No Further Action
UST ID: Not reported
Lead Program Assigned to Case: Bureau of Underground Storage Tanks
CSL ID: 5/24/99 0:00:00
TMS Number: Not reported
Remecdial Level: C2
Case Manager: BP
Web Data Case Manager: Bill Patterson

J41 ESE 1/4-1/2 1777 Higher

CONTI ENTERPRISES INC
200 ST NICHOLAS AVE
SOUTH PLAINFIELD, NJ 07080

UST **U000360497**
SHWS **N/A**

SHWS:
Facility ID: NJL600067524
Case Status: ACTIVE
Contact: BUST
Facility Status: OPEN
CEA/DER: Not reported
Case ID: 0107903
Status Date: 08/21/1991

CONTI ENTERPRISES INC (Continued) U000360497

UST:

Facility ID:	0107903	Facility Status:	Inactive
Install Date:	1/1/87 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	4.00	Owner Tank ID:	4

Operator:	JOHN CZAPOR
Operator Address:	Not reported
Owner:	CONTI ENTERPRISES INC
Owner Address:	3001 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	0.00 Gallons
Tank Contents:	F. WASTE OIL
Tank Construction:	H. OTHER: UNKNOWN
Tank Structure:	A. SINGLE WALL
Pipe Contents:	H. OTHER
Pipe Structure:	Not reported
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0107903	Facility Status:	Inactive
Install Date:	1/1/75 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	2.00	Owner Tank ID:	2

Operator:	JOHN CZAPOR
Operator Address:	Not reported
Owner:	CONTI ENTERPRISES INC
Owner Address:	3001 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	0.00 Gallons
Tank Contents:	A. LEADED GASOLINE
Tank Construction:	H. OTHER: UNKNOWN
Tank Structure:	A. SINGLE WALL
Pipe Contents:	H. OTHER
Pipe Structure:	Not reported
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

CONTI ENTERPRISES INC (Continued) U000360497

Facility ID:	0107903	Facility Status:	Inactive
Install Date:	1/1/73 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	1.00	Owner Tank ID:	1

Operator:	JOHN CZAPOR
Operator Address:	Not reported
Owner:	CONTI ENTERPRISES INC
Owner Address:	3001 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	8000.00 Gallons
Tank Contents:	H. Home Heating Oil (No. 2)
Tank Construction:	A. Bare steel
Tank Structure:	A. Single Wall
Pipe Contents:	A. Bare Steel
Pipe Structure:	A. Single Wall
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. Removed
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	6/3/92 0:00:00
Tank Closure Number:	N98-2783
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	No
Is Facility in Compliance Rules:	0

Facility ID:	0107903	Facility Status:	Inactive
Install Date:	1/1/75 0:00:00	Facility Type:	B. Commercial/Industrial
Unique Tank ID:	3.00	Owner Tank ID:	3

Operator:	JOHN CZAPOR
Operator Address:	Not reported
Owner:	CONTI ENTERPRISES INC
Owner Address:	3001 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	0.00 Gallons
Tank Contents:	E. MEDIUM DIESEL FUEL (NO. 2-D)
Tank Construction:	H. OTHER: UNKNOWN
Tank Structure:	A. SINGLE WALL
Pipe Contents:	H. OTHER
Pipe Structure:	Not reported
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

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42 ESE 1/4-1/2 1968 Higher — **CONTI ENTERPRISES INC**, **200 SAINT NICHOLAS AVE**, **SOUTH PLAINFIELD, NJ** — **LUST** — **S103910912** **N/A**

CONTI ENTERPRISES INC (Continued) — **S103910912**

LUST:

Facility ID:	Not reported
Facility Status:	Case Awaiting Assignment
UST ID:	0107903
Lead Program Assigned to Case:	Bureau of Field Operations - Initial Notice Section
CSL ID:	Not reported
TMS Number:	N98-2783
Remecdial Level:	Not reported
Case Manager:	Not reported
Web Data Case Manager:	Not reported

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43 SSE 1/4-1/2 2156 Higher — **SYNERGY GAS CORP**, **4700 S CLINTON AVE**, **S PLAINFIELD, NJ 07080** — **UST** / **LUST** — **U000362512** / **N/A**

LUST:

Facility ID:	94-08-08-0916
Facility Status:	Case Awaiting Assignment
UST ID:	0132275
Lead Program Assigned to Case:	Bureau of Field Operations - Initial Notice Section
CSL ID:	Not reported
TMS Number:	C94-1382
Remecdial Level:	Not reported
Case Manager:	Not reported
Web Data Case Manager:	Not reported

UST:

Facility ID:	0132275	Facility Status:	Inactive
Install Date:	1/1/87 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	1.00	Owner Tank ID:	1

Operator:	Not reported
Operator Address:	Not reported
Owner:	SYNERGY GAS CORP
Owner Address:	175 PRICE PKWY FARMINGDALE, NY 11735
Tank Capacity:	0.00 Gallons
Tank Contents:	E. MEDIUM DIESEL FUEL (NO. 2-D)
Tank Construction:	H. OTHER: GALVANIZED B. CATHODICALLY PROTECTED STEEL H. OTHER: COATED
Tank Structure:	A. SINGLE WALL
Pipe Contents:	H. OTHER
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
44 NNW 1/4-1/2 2157 Higher	FEDERAL INTERNAT'L CHEMICALS 3474 RAND ROAD SOUTH PLAINFIELD, NJ 07080	TSCA UST SHWS	1000212433 N/A

SHWS:

Facility ID: NJD986592046
Case Status: ACTIVE
Contact: BFCM-6
Facilty Status: OPEN
CEA/DER: Not reported
Case ID: E88A89
Status Date: 12/11/1991

Facility ID: NJD986592046
Case Status: ACTIVE
Contact: BEECRA
Facilty Status: OPEN
CEA/DER: Not reported
Case ID: E87232
Status Date: 01/28/1993

UST:

Facility ID: 0042310
Install Date: 1/1/73 0:00:00
Unique Tank ID: 5.00
Facility Status: Inactive
Facility Type: B. COMMERCIAL/INDUSTRIAL
Owner Tank ID: 0005

Operator:	Not reported
Operator Address:	Not reported
Owner:	ENTERPRISE COMPANIES DIV INSILCO
Owner Address:	1191 S WHEELING RD WHEELING, IL 60090
Tank Capacity:	1500.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction:	B. CATHODICALLY PROTECTED STEEL
Tank Structure:	A. SINGLE WALL A. SINGLE WALL
Pipe Contents:	A. BARE STEEL
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

FEDERAL INTERNAT'L CHEMICALS (Continued) **1000212433**

Facility ID:	0042310	Facility Status:	Inactive
Install Date:	1/1/73 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	6.00	Owner Tank ID:	0006

Operator:	Not reported
Operator Address:	Not reported
Owner:	ENTERPRISE COMPANIES DIV INSILCO
Owner Address:	1191 S WHEELING RD WHEELING, IL 60090
Tank Capacity:	1500.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES: MINERAL SPIRITS
Tank Construction:	B. CATHODICALLY PROTECTED STEEL
Tank Structure:	A. SINGLE WALL A. SINGLE WALL
Pipe Contents:	A. BARE STEEL
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0042310	Facility Status:	Inactive
Install Date:	1/1/73 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	4.00	Owner Tank ID:	0004

Operator:	Not reported
Operator Address:	Not reported
Owner:	ENTERPRISE COMPANIES DIV INSILCO
Owner Address:	1191 S WHEELING RD WHEELING, IL 60090
Tank Capacity:	1000.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES: SOLVENT BLEND
Tank Construction:	B. CATHODICALLY PROTECTED STEEL
Tank Structure:	A. SINGLE WALL A. SINGLE WALL
Pipe Contents:	A. BARE STEEL
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

FEDERAL INTERNAT'L CHEMICALS (Continued) **1000212433**

Facility ID: 0042310
Install Date: 1/1/73 0:00:00
Unique Tank ID: 3.00
Facility Status: Inactive
Facility Type: B. COMMERCIAL/INDUSTRIAL
Owner Tank ID: 0003
Operator: Not reported
Operator Address: Not reported
Owner: ENTERPRISE COMPANIES DIV INSILCO
Owner Address: 1191 S WHEELING RD
WHEELING, IL 60090
Tank Capacity: 1000.00 Gallons
Tank Contents: P. OTHER HAZARDOUS SUBSTANCES:
Tank Construction: B. CATHODICALLY PROTECTED STEEL
Tank Structure: A. SINGLE WALL A. SINGLE WALL
Pipe Contents: A. BARE STEEL
Pipe Structure: A. SINGLE WALL
Over Fill Products: No
Spill Containment Around Fill Pipe: No
Tank Status: G. REMOVED
Date Tank Removed: Not reported
Date Tank Abandoned in Place: Not reported
Date Tank Taken Out of Service: Not reported
Date of Tank Sale or Transfer: Not reported
Tank Closure Number: Not reported
Tank ISRA Number: Not reported
Tank in Wellhead Protection Area: Not reported
Is Facility in Compliance Rules: 0

Facility ID: 0042310
Install Date: 1/1/73 0:00:00
Unique Tank ID: 2.00
Facility Status: Inactive
Facility Type: B. COMMERCIAL/INDUSTRIAL
Owner Tank ID: 0002
Operator: Not reported
Operator Address: Not reported
Owner: ENTERPRISE COMPANIES DIV INSILCO
Owner Address: 1191 S WHEELING RD
WHEELING, IL 60090
Tank Capacity: 1000.00 Gallons
Tank Contents: P. OTHER HAZARDOUS SUBSTANCES: MINERAL SPIRITS
Tank Construction: B. CATHODICALLY PROTECTED STEEL
Tank Structure: A. SINGLE WALL A. SINGLE WALL
Pipe Contents: A. BARE STEEL
Pipe Structure: A. SINGLE WALL
Over Fill Products: No
Spill Containment Around Fill Pipe: No
Tank Status: G. REMOVED
Date Tank Removed: Not reported
Date Tank Abandoned in Place: Not reported
Date Tank Taken Out of Service: Not reported
Date of Tank Sale or Transfer: Not reported
Tank Closure Number: Not reported
Tank ISRA Number: Not reported
Tank in Wellhead Protection Area: Not reported
Is Facility in Compliance Rules: 0

FEDERAL INTERNAT'L CHEMICALS (Continued) **1000212433**

Facility ID:	0042310	Facility Status:	Inactive
Install Date:	1/1/73 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	1.00	Owner Tank ID:	0001

Operator:	Not reported
Operator Address:	Not reported
Owner:	ENTERPRISE COMPANIES DIV INSILCO
Owner Address:	1191 S WHEELING RD WHEELING, IL 60090
Tank Capacity:	1000.00 Gallons
Tank Contents:	P. OTHER HAZARDOUS SUBSTANCES: NAPTHOL SPIRITS
Tank Construction:	B. CATHODICALLY PROTECTED STEEL
Tank Structure:	A. SINGLE WALL A. SINGLE WALL
Pipe Contents:	A. BARE STEEL
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility In Compliance Rules:	0

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45 ENE 1/4-1/2 2234 Higher

PROSOCO INC PLT
111 SNYDER RD
SOUTH PLAINFIELD, NJ 07080

FINDS **1000383676**
RCRIS-LQG **NJD061809125**
NJ Spills
NJ Release
SHWS

RCRIS:

Owner:	BOYER PROPERTIES NJ (212) 555-1212
Contact:	BRUCE SHERROD (908) 754-6813
Record Date:	02/02/1988
Classification:	Large Quantity Generator
Used Oil Recyc:	No
Violation Status:	Violation information exist

There are 1 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Evaluation Inspection (CEI)	Generator-Land Ban Requirements	05/12/1998

NY MANIFEST
Additional detail is available in NY MANIFEST. Please contact your EDR Account Executive for more information.

PROSOCO INC PLT (Continued) **1000383676**

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Permit Compliance System (PCS)

SHWS:
Facility ID: NJL000068742
Case Status: ACTIVE
Contact: BFO-S
Facity Status: OPEN
CEA/DER: Not reported
Case ID: 930909122200
Status Date: 08/17/1993

NJ Release:
Facility ID: 15353
Date Received: 09/09/1993
Location: Facility
Facility Phone: Not reported
Date of Incident: Not reported
Substance(s): VOLATILE ORGANICS
Substance Type: Liquid
A310 Letter: Yes
Hazrds Material: Yes
COMU: 1222
Amnt Released: UNKNOWN
Release Type: Terminated
Injuries: No
Public Exposure: Unknown
Police at Scene: No
Contamination of: Water
Case Number: 93-9-9-1222-00
Operator: JIMS
Nature of Incident: Other
Facility Type: Industrial
Time of Incident: Not reported
Substance Identity: Known
TCPA Chemical: No
CAS Number: Not reported
Ref. Code: 101
Release VE: Not reported
Contained: No
Facility Evacuation: No
Public Evacuation: No
Firemen at Scene: No
Receiving Water: UNKNOWN

Caller:
Name: NATE BYRD
Address: 300 HORIZON CTR
ROBBINSVILLE, NJ
Telephone: 609-584-4280
Title: DEPE

Responsible Party:
Name: Known
Contact: Not reported
Address: 111 SNYDER RD
SOUTH PLAINFIELD, NJ
County: MIDDLESEX
Company: PROSOCO INC
Title: Not reported
Telephone: Not reported

NJ Spill:
Name: Not reported
Telephone: Not reported
Date: Not reported
Title: Not reported
Time: Not reported

Local Municipality:
Name: SOUTH PLAINFIELD B
Telephone: 908-755-0700
Date: 09/09/1993
Municipality Title: OPER 4895
Time: 12:30

Other:
Name: Not reported
Telephone: Not reported
Date: Not reported
Title: Not reported
Time: Not reported

Incident:
Name: Not reported
Region: BFO-SA
Date: 09/09/1993
ITM: B
Referred To: DRPSR
Telephone: Faxed,Mailed
Incident Time: Not reported

Incident Description: NJPDES
Wind Direction/Speed: Not reported

PROSOCO INC PLT (Continued) **1000383676**

Assistance Requested: Yes
Date A310 Letter Printed: 09/09/1993
Date Local Authority Was Notified: Not reported
Date Update: Not reported
Date Report Faxed to Local Authority: Not reported
Local Authority Notification Date 1: Not reported
Local Authority Notification Date 2: Not reported
Local Authority Notification Date 3: Not reported
Status at Spill: NPJDES MONITORING INDICATED VO CONTAMINATION IN GROUNDWATER
Comments: Not reported

Facility ID:	17517	Case Number:	93-10-15-1340-21
Date Received:	10/15/1993	Operator:	ROGER
Location:	Facility	Nature of Incident:	Other
Facility Phone:	908-754-4410	Facility Type:	Industrial
Date of Incident:	06/06/1993	Time of Incident:	Not reported
Substance(s):	BLACK & WHITE SLUDGE SOIL CONTAMINATED		
Substance Type:	Solid	Substance Identity:	Unknown
A310 Letter:	Yes	TCPA Chemical:	No
Hazrds Material:	Yes	CAS Number:	Not reported
COMU:	1222	Ref. Code:	101
Amnt Released:	UNKNOWN	Release VE:	Not reported
Release Type:	Terminated	Contained:	No
Injuries:	No	Facility Evacuation:	No
Public Exposure:	No	Public Evacuation:	No
Police at Scene:	No	Firemen at Scene:	No
Contamination of:	Land	Receiving Water:	Not reported
Caller:			
Name:	DWAYNE FUHLHAGE	Title:	PROSOCO
Address:	111 SNYDER RD SOUTH PLAINFIELD, NJ		
Telephone:	913-281-2700		
Responsible Party:			
Name:	Suspected	Company:	PFINGST
Contact:	Not reported	Title:	Not reported
Address:	105 SNYDER RD SOUTH PLAINFIELD, NJ		
County:	MIDDLESEX	Telephone:	Not reported
NJ Spill:			
Name:	Not reported	Title:	Not reported
Telephone:	Not reported		
Date:	Not reported	Time:	Not reported
Local Municipality:			
Name:	SOUTH PLAINFIELD B	Municipality Title:	OPR 7367
Telephone:	908-755-0700		
Date:	10/15/1993	Time:	13:50
Other:			
Name:	Not reported	Title:	Not reported
Telephone:	Not reported		
Date:	Not reported	Time:	Not reported
Incident:			
Name:	Not reported	Referred To:	DRPSR
Region:	BFO-SA	Telephone:	Faxed
Date:	10/15/1993	Incident Time:	Not reported
ITM:	T		

Incident Description: Sloppy Housekeeping

PROSOCO INC PLT (Continued) **1000383676**

Wind Direction/Speed: Not reported
Assistance Requested: No
Date A310 Letter Printed: Not reported
Date Local Authority Was Notified: Not reported
Date Update: Not reported
Date Report Faxed to Local Authority: Not reported
Local Authority Notification Date 1: Not reported
Local Authority Notification Date 2: Not reported
Local Authority Notification Date 3: Not reported
Status at Spill: SOIL SAMPLES TAKEN ON ABOVE DATE SHOW CONTAMINATION,FROM VOLITAL ORGANICS MATERIAL IS SUSPECTED TO BE COMMING FROM NEIGHBORING FACILITY.
Comments: Not reported

NJ Spill:

Facility ID:	17517	Case Number:	93-10-15-1340-21
Date Received:	10/15/1993	Operator:	ROGER
Location:	Facility	Nature of Incident:	Other
Facility Phone:	908-754-4410	Facility Type:	Industrial
Date of Incident:	06/06/1993	Time of Incident:	Not reported
Substance(s):	BLACK & WHITE SLUDGE SOIL CONTAMINATED		
Substance Type:	Solid	Substance Identity:	Unknown
A310 Letter:	Yes	TCPA Chemical:	No
Hazrds Material:	Yes	CAS Number:	Not reported
COMU:	1222	Ref. Code:	101
Amnt Released:	UNKNOWN	Release VE:	Not reported
Release Type:	Terminated	Contained:	No
Injuries:	No	Facility Evacuation:	No
Public Exposure:	No	Public Evacuation:	No
Police at Scene:	No	Firemen at Scene:	No
Contamination of:	Land	Receiving Water:	Not reported

Caller:

Name:	DWAYNE FUHLHAGE	Title:	PROSOCO
Address:	111 SNYDER RD SOUTH PLAINFIELD, NJ		
Phone:	913-281-2700		

Responsible Party:

Name:	Suspected	Company:	PFINGST
Contact:	Not reported	Title:	Not reported
Address:	105 SNYDER RD SOUTH PLAINFIELD, NJ		
County:	MIDDLESEX	Phone:	Not reported

NJ Spill:

Name:	Not reported	Title:	Not reported
Phone:	Not reported		
Date:	Not reported	Time:	Not reported

Local Municipality:

Name:	SOUTH PLAINFIELD B	Title:	OPR 7367
Phone:	908-755-0700		
Date:	10/15/1993	Time:	13:50

Other:

Name:	Not reported	Title:	Not reported
Phone:	Not reported		
Date:	Not reported	Time:	Not reported

Incident:

Name:	Not reported	Referred To:	DRPSR
Region:	BFO-SA	Telephone:	Faxed

PROSOCO INC PLT (Continued) **1000383676**

Date: 10/15/1993 Incident Time: Not reported
ITM: T
Incident Description: Sloppy Housekeeping
Wind Direction/Speed: Not reported
Assistance Requested: No
Date A310 Letter Printed: Not reported
Date Local Authority Was Notified: Not reported
Date Update: Not reported
Date Report Faxed to Local Authority: Not reported
Local Authority Notification Date 1: Not reported
Local Authority Notification Date 2: Not reported
Local Authority Notification Date 3: Not reported
Status at Spill: SOIL SAMPLES TAKEN ON ABOVE DATE SHOW CONTAMINATION,FROM VOLITAL ORGANICS MATERIAL IS SUSPECTED TO BE COMMING FROM NEIGHBORING FACILITY.
Comments: Not reported

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46 West 1/4-1/2 2299 Higher

6 JOYCE DRIVE
6 JOYCE DR
PISCATAWAY TOWNSHIP, NJ

SHWS **S103033510** **N/A**

SHWS:
Facility ID: NJL800234510 Case ID: 960626124420
Case Status: NFA Status Date: 11/27/1996
Contact: BFO-S
Facility Status: CLOSED
CEA/DER: Not reported

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47 SE 1/4-1/2 2377 Higher

BINDER MACHINERY CO
2820 HAMILTON BLVD
SOUTH PLAINFIEL, NJ 07080

FINDS **1000187743**
RCRIS-LQG **NJD011806452**
NJ Spills
NJ Release
SHWS

RCRIS:
Owner: BINDER MACHINERY CO
(212) 555-1212
Contact: ARNOLD KIMMEL
(908) 561-9000
Record Date: 10/24/1985
Classification: Large Quantity Generator, Small Quantity Generator, Hazardous Waste Transporter
Used Oil Recyc: No
Violation Status: Violation information exist

BINDER MACHINERY CO (Continued) **1000187743**

There are 16 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Schedule Evaluation (CSE)	TSD-Corrective Action Compliance Schedule	10/22/1990
	Formal Enforcement Agreement	10/22/1990
	Formal Enforcement Agreement	10/22/1990
	TSD-Corrective Action Compliance Schedule	10/22/1990
	Formal Enforcement Agreement	10/22/1990
	Formal Enforcement Agreement	10/22/1990
	TSD-Corrective Action Compliance Schedule	10/22/1990
	Formal Enforcement Agreement	10/22/1990
	Generator-All Requirements	04/05/1995
	Generator-All Requirements	04/05/1995
	Generator-All Requirements	04/05/1995
Compliance Evaluation Inspection (CEI)	Generator-All Requirements	04/05/1995
	Generator-All Requirements	04/05/1995
	Generator-All Requirements	04/05/1995
Non-Financial Record Review	Formal Enforcement Agreement	10/22/1990
	TSD-Corrective Action Compliance Schedule	10/22/1990
	Formal Enforcement Agreement	10/22/1990
Non-Financial Record Review	Formal Enforcement Agreement	10/22/1990
	TSD-Corrective Action Compliance Schedule	10/22/1990
	Formal Enforcement Agreement	10/22/1990
Compliance Schedule Evaluation (CSE)	Formal Enforcement Agreement	10/22/1990
	TSD-Corrective Action Compliance Schedule	10/22/1990
	Formal Enforcement Agreement	10/22/1990
Compliance Evaluation Inspection (CEI)	Generator-All Requirements	10/22/1990
	Generator-All Requirements	10/22/1990
	Generator-All Requirements	10/22/1990
	Generator-All Requirements	10/22/1990

SHWS:

Facility ID: NJD011806452
Case Status: NFA-A
Contact: BUST
Facilty Status: CLOSED
CEA/DER: Not reported

Case ID: 0064613
Status Date: 10/30/1996

NJ Release:

Facility ID: 787
Date Received: 01/18/1994
Location: Other
Facility Phone: Not reported
Date of Incident: 01/18/1994
Substance(s): DIESEL FUEL
Substance Type: Liquid
A310 Letter: Yes
Hazrds Material: Yes
COMU: 1222
Amnt Released: UNK
Release Type: Terminated
Injuries: No
Public Exposure: No
Police at Scene: No
Contamination of: Land
Caller:

Case Number: 94-1-18-1634-37
Operator: DAVE
Nature of Incident: Other
Facility Type: Industrial
Time of Incident: 14:00

Substance Identity: Known
TCPA Chemical: No
CAS Number: Not reported
Ref. Code: 101
Release VE: Not reported
Contained: Yes
Facility Evacuation: No
Public Evacuation: No
Firemen at Scene: No
Receiving Water: Not reported

BINDER MACHINERY CO (Continued) **1000187743**

Name: CARLOS CASTILLO Title: LUTZ ENV
Address: Not reported
Telephone: 908-862-6633
Responsible Party:
Name: Known Company: BINDER MACHINERY CO
Contact: Not reported Title: Not reported
Address: 2820 HAMILTON BLVD
SOUTH PLAINFIELD, NJ
County: MIDDLESEX Telephone: Not reported
NJ Spill:
Name: Not reported Title: Not reported
Telephone: Not reported
Date: Not reported Time: Not reported
Local Municipality:
Name: SOUTH PLAINFIELD B Municipality Title: ANDERSON
Telephone: 908-755-0700
Date: 01/18/1994 Time: 16:36
Other:
Name: Not reported Title: Not reported
Telephone: Not reported
Date: Not reported Time: Not reported
Incident:
Name: Not reported Referred To: DRPSR
Region: BFO-SA Telephone: Not reported
Date: 01/18/1994 Incident Time: Not reported
ITM: B
Incident Description: Spill
Wind Direction/Speed: Not reported
Assistance Requested: No
Date A310 Letter Printed: Not reported
Date Local Authority Was Notified: Not reported
Date Update: Not reported
Date Report Faxed to Local Authority: Not reported
Local Authority Notification Date 1: Not reported
Local Authority Notification Date 2: Not reported
Local Authority Notification Date 3: Not reported
Status at Spill: WHILE REMOVING USTS, LUTZ DISCOVERED OLD SPILLS AROUND TANKS. LUTZ HAS REMEDIATION UNDERWAY.
Comments: Not reported

NJ Spill:
Facility ID: 787 Case Number: 94-1-18-1634-37
Date Received: 01/18/1994 Operator: DAVE
Location: Other Nature of Incident: Other
Facility Phone: Not reported Facility Type: Industrial
Date of Incident: 01/18/1994 Time of Incident: 14:00
Substance(s): DIESEL FUEL
Substance Type: Liquid Substance Identity: Known
A310 Letter: Yes TCPA Chemical: No
Hazrds Material: Yes CAS Number: Not reported
COMU: 1222 Ref. Code: 101
Amnt Released: UNK Release VE: Not reported
Release Type: Terminated Contained: Yes
Injuries: No Facility Evacuation: No
Public Exposure: No Public Evacuation: No
Police at Scene: No Firemen at Scene: No
Contamination of: Land Receiving Water: Not reported
Caller:

BINDER MACHINERY CO (Continued) **1000187743**

Name: CARLOS CASTILLO Title: LUTZ ENV
Address: Not reported
Phone: 908-862-6633
Responsible Party:
Name: Known Company: BINDER MACHINERY CO
Contact: Not reported Title: Not reported
Address: 2820 HAMILTON BLVD
SOUTH PLAINFIELD, NJ
County: MIDDLESEX Phone: Not reported
NJ Spill:
Name: Not reported Title: Not reported
Phone: Not reported
Date: Not reported Time: Not reported
Local Municipality:
Name: SOUTH PLAINFIELD B Title: ANDERSON
Phone: 908-755-0700
Date: 01/18/1994 Time: 16:36
Other:
Name: Not reported Title: Not reported
Phone: Not reported
Date: Not reported Time: Not reported
Incident:
Name: Not reported Referred To: DRPSR
Region: BFO-SA Telephone: Not reported
Date: 01/18/1994 Incident Time: Not reported
ITM: B
Incident Description: Spill
Wind Direction/Speed: Not reported
Assistance Requested: No
Date A310 Letter Printed: Not reported
Date Local Authority Was Notified: Not reported
Date Update: Not reported
Date Report Faxed to Local Authority: Not reported
Local Authority Notification Date 1: Not reported
Local Authority Notification Date 2: Not reported
Local Authority Notification Date 3: Not reported
Status at Spill: WHILE REMOVING USTS, LUTZ DISCOVERED OLD SPILLS AROUND TANKS. LUTZ HAS REMEDIATION UNDERWAY.
Comments: Not reported

K48 **ABSOLUTE FIRE PROTECTION CO IN** **RCRIS-SQG** **1000980906**
SE **2800 HAMILTON BLVD** **FINDS** **NJ0000977876**
1/4-1/2 **SOUTH PLAINFIEL, NJ 07080** **NJ Spills**
2383 **NJ Release**
Higher **SHWS**
LUST

ABSOLUTE FIRE PROTECTION CO IN (Continued) **1000980906**

RCRIS:
Owner: ABSOLUTE FIRE PROTECTION CO INC
(908) 757-3600
Contact: THOMAS PIZIO
(908) 757-3600
Record Date: 12/14/1994
Classification: Small Quantity Generator
Used Oil Recyc: No
Violation Status: No violations found

SHWS:
Facility ID: NJP000862904 Case ID: 0057387
Case Status: ACTIVE Status Date: 05/31/1996
Contact: BUST
Facility Status: OPEN
CEA/DER: Not reported

Facility ID: NJP000862904 Case ID: 8806281324
Case Status: NFA-A Status Date: 06/25/1997
Contact: BFO-S
Facility Status: CLOSED
CEA/DER: Not reported

LUST:
Facility ID: Not reported
Facility Status: Assigned to a Program
UST ID: 0057307
Lead Program Assigned to Case: Bureau of Field Operations - Initial Notice Section
CSL ID: Not reported
TMS Number: N98-2329;N98-2330
Remecdial Level: Not reported
Case Manager: HP
Web Data Case Manager: Hasmukh Patel

NJ Release:
Facility ID: 19145 Case Number: 94-10-25-1703-53
Date Received: 10/25/1994 Operator: DIANNE
Location: Facility Nature of Incident: Facility
Facility Phone: 908-757-3600 Facility Type: Commercial
Date of Incident: 10/25/1994 Time of Incident: 17:00
Substance(s): GASOLINE
Substance Type: Liquid Substance Identity: Known
A310 Letter: Yes TCPA Chemical: No
Hazrds Material: Yes CAS Number: Not reported
COMU: 1222 Ref. Code: 101
Amnt Released: UNKNOWN Release VE: Not reported
Release Type: Terminated Contained: Yes
Injuries: No Facility Evacuation: No
Public Exposure: No Public Evacuation: No
Police at Scene: No Firemen at Scene: No
Contamination of: Land Receiving Water: Not reported
Caller:
Name: JOE GALLEY Title: TECH STANDARDS ASC
Address: 66 ELM ST
DOVER, NJ

ABSOLUTE FIRE PROTECTION CO IN (Continued) **1000980906**

Telephone: 201-361-0014
Responsible Party:
Name: Known
Contact: BILL WRUBLEVSKI
Address: 2800 HAMILTON BLVD
SOUTH PLAINFIELD, NJ
County: MIDDLESEX
Company: ABSOLUTE FIRE PROTEC
Title: VICE PREZ
Telephone: 908-757-3600
NJ Spill:
Name: Not reported
Title: Not reported
Telephone: Not reported
Date: Not reported
Time: Not reported
Local Municipality:
Name: SOUTH PLAINFIELD B
Municipality Title: OPR #8134
Telephone: 908-755-0700
Date: 10/25/1994
Time: 17:25
Other:
Name: Not reported
Title: Not reported
Telephone: Not reported
Date: Not reported
Time: Not reported
Incident:
Name: Not reported
Referred To: DRPSR
Region: BFO-CAS
Telephone: Faxed,Mailed
Date: 10/25/1994
Incident Time: Not reported
ITM: B
Incident Description: U.S.T.
Wind Direction/Speed: Not reported
Assistance Requested: No
Date A310 Letter Printed: Not reported
Date Local Authority Was Notified: Not reported
Date Update: Not reported
Date Report Faxed to Local Authority: Not reported
Local Authority Notification Date 1: Not reported
Local Authority Notification Date 2: Not reported
Local Authority Notification Date 3: Not reported
Status at Spill: 1-5000 GAL UST REMOVED. SOIL CONTAMINATION FOUND DUE TO OVERFILL. CLEAN UP DONE BY GOLD STAR ENV. SERVICES. UST#0057307 TMS#C94-1529.
Comments: Not reported

NJ Spill:
Facility ID: 19145
Case Number: 94-10-25-1703-53
Date Received: 10/25/1994
Operator: DIANNE
Location: Facility
Nature of Incident: Facility
Facility Phone: 908-757-3600
Facility Type: Commercial
Date of Incident: 10/25/1994
Time of Incident: 17:00
Substance(s): GASOLINE
Substance Type: Liquid
Substance Identity: Known
A310 Letter: Yes
TCPA Chemical: No
Hazrds Material: Yes
CAS Number: Not reported
COMU: 1222
Ref. Code: 101
Amnt Released: UNKNOWN
Release VE: Not reported
Release Type: Terminated
Contained: Yes
Injuries: No
Facility Evacuation: No
Public Exposure: No
Public Evacuation: No
Police at Scene: No
Firemen at Scene: No
Contamination of: Land
Receiving Water: Not reported
Caller:
Name: JOE GALLEY
Title: TECH STANDARDS ASC
Address: 66 ELM ST

ABSOLUTE FIRE PROTECTION CO IN (Continued) **1000980906**

DOVER, NJ
Phone: 201-361-0014
Responsible Party:
Name: Known | Company: ABSOLUTE FIRE PROTEC
Contact: BILL WRUBLEVSKI | Title: VICE PREZ
Address: 2800 HAMILTON BLVD
SOUTH PLAINFIELD, NJ
County: MIDDLESEX | Phone: 908-757-3600
NJ Spill:
Name: Not reported | Title: Not reported
Phone: Not reported
Date: Not reported | Time: Not reported
Local Municipality:
Name: SOUTH PLAINFIELD B | Title: OPR #8134
Phone: 908-755-0700
Date: 10/25/1994 | Time: 17:25
Other:
Name: Not reported | Title: Not reported
Phone: Not reported
Date: Not reported | Time: Not reported
Incident:
Name: Not reported | Referred To: DRPSR
Region: BFO-CAS | Telephone: Faxed,Mailed
Date: 10/25/1994 | Incident Time: Not reported
ITM: B
Incident Description: U.S.T.
Wind Direction/Speed: Not reported
Assistance Requested: No
Date A310 Letter Printed: Not reported
Date Local Authority Was Notified: Not reported
Date Update: Not reported
Date Report Faxed to Local Authority: Not reported
Local Authority Notification Date 1: Not reported
Local Authority Notification Date 2: Not reported
Local Authority Notification Date 3: Not reported
Status at Spill: 1-5000 GAL UST REMOVED. SOIL CONTAMINATION FOUND DUE TO OVERFILL. CLEAN UP DONE BY GOLD STAR ENV. SERVICES. UST#0057307 TMS#C94-1529.
Comments: Not reported

K49 **ABSOLUTE FIRE PROTECTION COMPANY INCORPORATED** **LUST** **S103091718**
SE **2800 HAMILTON BLVD** **N/A**
1/4-1/2 **SOUTH PLAINFIELD, NJ**
2383
Higher

LUST:
Facility ID: 94-10-25-1703
Facility Status: Assigned to a Program
UST ID: 0057387
Lead Program Assigned to Case: Bureau of Underground Storage Tanks
CSL ID: Not reported
TMS Number: C94-1529;N98-2330
Remedial Level: C2
Case Manager: JGB
Web Data Case Manager: Judy Bayard

50 NE 1/4-1/2 2394 Higher — **TEVCO, INC.**, **110 POMPONIO AVE**, **SOUTH PLAINFIELD, NJ 70800** — **Maj Facilities** — **S101899912** / **N/A**

NJ MAJOR FACILITIES:

Facility ID:	1220041000
CAS Number:	67630
Hazardous Substance:	50000
Hazardous Substance Name:	ISOPROPYL ALCOHOL
Haz Substance Stored Underground:	0
Haz Substance Stored in Other Places:	0
Maximum Amount Storred:	550

Facility ID:	1220041000
CAS Number:	67641
Hazardous Substance:	50000
Hazardous Substance Name:	ACETONE
Haz Substance Stored Underground:	0
Haz Substance Stored in Other Places:	0
Maximum Amount Storred:	550

Facility ID:	1220041000
CAS Number:	84742
Hazardous Substance:	50000
Hazardous Substance Name:	DIBUTYL PTHALATE
Haz Substance Stored Underground:	0
Haz Substance Stored in Other Places:	0
Maximum Amount Storred:	1900

Facility ID:	1220041000
CAS Number:	108883
Hazardous Substance:	50000
Hazardous Substance Name:	TOLUENE
Haz Substance Stored Underground:	0
Haz Substance Stored in Other Places:	0
Maximum Amount Storred:	9900

Facility ID:	1220041000
CAS Number:	123864
Hazardous Substance:	50000
Hazardous Substance Name:	N-BUTYL ACETATE
Haz Substance Stored Underground:	0
Haz Substance Stored in Other Places:	0
Maximum Amount Storred:	9900

Facility ID:	1220041000
CAS Number:	140885
Hazardous Substance:	50000
Hazardous Substance Name:	ETHYL ACETATE
Haz Substance Stored Underground:	0
Haz Substance Stored in Other Places:	0
Maximum Amount Storred:	15500

TEVCO, INC. (Continued) **S101899912**

Facility ID:	1220041000
CAS Number:	********
Hazardous Substance:	50000
Hazardous Substance Name:	NITROCELLULOSE/IPA
Haz Substance Stored Underground:	0
Haz Substance Stored in Other Places:	0
Maximum Amount Storred:	24200

L51 East 1/4-1/2 2520 Higher

VANGUARD RESEARCH INDUSTRIES, INC.
239 SAINT NICHOLAS AVE
SOUTH PLAINFIELD, NJ 70800

Maj Facilities **S103580646**
N/A

NJ MAJOR FACILITIES:

Facility ID:	1222002960
CAS Number:	7681529
Hazardous Substance:	18290
Hazardous Substance Name:	SODIUM HYPOCHLORITE
Haz Substance Stored Underground:	0
Haz Substance Stored in Other Places:	6875
Maximum Amount Storred:	5000

L52 East 1/4-1/2 2520 Higher

VANGUARD RESEARCH INDUSTRIES, INC.
239 SAINT NICHOLAS AVE
SOUTH PLAINFIELD, NJ 70800

Maj Facilities **S103580644**
N/A

NJ MAJOR FACILITIES:

Facility ID:	1222002960
CAS Number:	1310732
Hazardous Substance:	18290
Hazardous Substance Name:	SODIUM HYDROXIDE
Haz Substance Stored Underground:	0
Haz Substance Stored in Other Places:	6875
Maximum Amount Storred:	9100

L53 East 1/4-1/2 2520 Higher

VANGUARD RESEARCH INDUSTRIES, INC.
239 SAINT NICHOLAS AVE
SOUTH PLAINFIELD, NJ 70800

Maj Facilities **S103580645**
N/A

NJ MAJOR FACILITIES:

Facility ID:	1222002960
CAS Number:	7647010
Hazardous Substance:	18290
Hazardous Substance Name:	HYDROCHLORIC ACID
Haz Substance Stored Underground:	0
Haz Substance Stored in Other Places:	6875
Maximum Amount Storred:	4465

Map ID Direction Distance Distance (ft.) Elevation	Site	Database(s)	EDR ID Number EPA ID Number
L54 **East** **1/4-1/2** **2520** **Higher**	**VANGUARD RESEARCH INDUSTRIES, INC.** **239 SAINT NICHOLAS AVE** **SOUTH PLAINFIELD, NJ 70800**	**Maj Facilities**	**S103580643** **N/A**

NJ MAJOR FACILITIES:

Facility ID:	1222002960
CAS Number:	57125
Hazardous Substance:	18290
Hazardous Substance Name:	CYANIDE
Haz Substance Stored Underground:	0
Haz Substance Stored in Other Places:	6875
Maximum Amount Stored:	6600

M55 **South** **1/4-1/2** **2619** **Higher**	**HOME DEPOT MAY KAY COSMETICS** **3100 HAMILTON BLVD** **SOUTH PLAINFIELD, NJ**	**LUST**	**S101995818** **N/A**

LUST:

Facility ID:	90-10-19-1651
Facility Status:	Not reported
UST ID:	0166917
Lead Program Assigned to Case:	ECRA
CSL ID:	Not reported
TMS Number:	Not reported
Remecdial Level:	Not reported
Case Manager:	JD
Web Data Case Manager:	Not reported

M56 **South** **1/4-1/2** **2619** **Higher**	**VICTAULIC COMPANY OF AMERICA** **3100 HAMILTON BOULEVARD** **SOUTH PLAINFIELD, NJ 07080**	**CERCLIS** **FINDS** **RCRIS-LQG**	**1000396403** **NJD002136117**

CERCLIS Classification Data:

Site Incident Category:	Not reported	Federal Facility:	Not a Federal Facility
Ownership Status:	Unknown	NPL Status:	Not on the NPL
Contact:	MICHELE BRICE-ROBINSON	Contact Tel:	(212) 637-3300
Contact:	BOBBY DEASE	Contact Tel:	(732) 906-6893
Contact:	EUGENE DOMINACH	Contact Tel:	(908) 321-6666
Contact:	HONORA DROHAN	Contact Tel:	(212) 637-4355
Contact:	GLADYS LEYNES	Contact Tel:	(212) 637-3301
Contact:	MARK SAVEDOFF	Contact Tel:	(732) 321-4341
Contact:	MARK SAVEDOFF	Contact Tel:	(908) 321-4341

Site Description: VICTAULIC INC. PRODUCED METAL PIPES AT THE SITE FROM 1965 TO MIDS 1970S. DRUMS CONTAINING SOLVENTS STORED ON SITE ARE THE SUSPECTED SOURCE OF PCE AND TCE CONTAMINATION FOUND IN DOMESTIC WELLS NEAR THE SITE.
VICTAULIC INC. PRODUCED METAL PIPES AT THE SITE FROM 1965 TO MIDS 1970S. DRUMS CONTAINING SOLVENTS STORED ON SITE ARE THE SUSPECTED SOURCE OF PCE AND TCE CONTAMINATION FOUND IN DOMESTIC WELLS NEAR THE SITE.

CERCLIS Assessment History:

Assessment:	DISCOVERY	Completed:	19960327
Assessment:	PRELIMINARY ASSESSMENT	Completed:	19960927

VICTAULIC COMPANY OF AMERICA (Continued) 1000396403

Assessment: SITE INSPECTION Completed: 19960927
CERCLIS Site Status:
High
CERCLIS Alias Name(s):
HOME DEPOT 903 THE (NJD982281206-RCRIS)

RCRIS:
Owner: Not reported
Contact: DOUGLAS R DOLE
(732) 752-0600
Record Date: 11/09/1981
Classification: Large Quantity Generator
Used Oil Recyc: No
Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
AIRS Facility System (AIRS/AFS)

M57 South 1/4-1/2 2619 Higher

MARY KAY COSMETICS
3100 HAMILTON BLVD
SOUTH PLAINFIELD, NJ 07080

UST **U003159028**
NJ Spills **N/A**
NJ Release
SHWS

SHWS:
Facility ID: NJD982281206
Case Status: ACTIVE
Contact: BFCM-6
Facility Status: OPEN
CEA/DER: Not reported
Case ID: E87823
Status Date: 04/04/1988

NJ Release:
Facility ID: 18096
Date Received: 11/11/1995
Location: Facility
Facility Phone: 908-752-5900
Date of Incident: 11/11/1995
Substance(s): OIL HYDRAULIC
Substance Type: Liquid
A310 Letter: Yes
Hazrds Material: Yes
COMU: 1222
Amnt Released: UNKNOWN
Release Type: Terminated
Injuries: No
Public Exposure: No
Police at Scene: No
Contamination of: Land
Case Number: 95-11-11-1337-22
Operator: JULIE1
Nature of Incident: Facility
Facility Type: Commercial
Time of Incident: 10:30
Substance Identity: Known
TCPA Chemical: No
CAS Number: Not reported
Ref. Code: 101
Release VE: Not reported
Contained: Yes
Facility Evacuation: No
Public Evacuation: No
Firemen at Scene: No
Receiving Water: NONE
Caller:
Name: SCOTT KAMELT
Address: 3100 HAMILTON BLVD
SOUTH PLAINFIELD, NJ
Telephone: 908-752-5900
Title: HOME DEPOT
Responsible Party:
Name: Known
Contact: SCOTT KAMELT
Company: HOME DEPOT
Title: SUPER

MARY KAY COSMETICS (Continued) **U003159028**

Address: 3100 HAMILTON BLVD
SOUTH PLAINFIELD, NJ
County: MIDDLESEX Telephone: 908-752-5900
NJ Spill:
Name: Not reported Title: Not reported
Telephone: Not reported
Date: Not reported Time: Not reported
Local Municipality:
Name: SOUTH PLAINFIELD B Municipality Title: OPR 4730
Telephone: 908-755-0700
Date: 11/11/1995 Time: 13:44
Other:
Name: Not reported Title: Not reported
Telephone: Not reported
Date: Not reported Time: Not reported
Incident:
Name: Not reported Referred To: DRPSR
Region: BFO-CAS Telephone: Faxed,Mailed
Date: 11/11/1995 Incident Time: Not reported
ITM: B
Incident Description: Spill
Wind Direction/Speed: Not reported
Assistance Requested: No
Date A310 Letter Printed: Not reported
Date Local Authority Was Notified: Not reported
Date Update: Not reported
Date Report Faxed to Local Authority: Not reported
Local Authority Notification Date 1: Not reported
Local Authority Notification Date 2: Not reported
Local Authority Notification Date 3: Not reported
Status at Spill: SPILL DUE TO BROKEN LIFT.CLEAN UP BEING DONE BY ENVIRO PRODUCTS & SERVICES
Comments: Not reported

NJ Spill:
Facility ID: 18096 Case Number: 95-11-11-1337-22
Date Received: 11/11/1995 Operator: JULIE1
Location: Facility Nature of Incident: Facility
Facility Phone: 908-752-5900 Facility Type: Commercial
Date of Incident: 11/11/1995 Time of Incident: 10:30
Substance(s): OIL HYDRAULIC
Substance Type: Liquid Substance Identity: Known
A310 Letter: Yes TCPA Chemical: No
Hazrds Material: Yes CAS Number: Not reported
COMU: 1222 Ref. Code: 101
Amnt Released: UNKNOWN Release VE: Not reported
Release Type: Terminated Contained: Yes
Injuries: No Facility Evacuation: No
Public Exposure: No Public Evacuation: No
Police at Scene: No Firemen at Scene: No
Contamination of: Land Receiving Water: NONE
Caller:
Name: SCOTT KAMELT Title: HOME DEPOT
Address: 3100 HAMILTON BLVD
SOUTH PLAINFIELD, NJ
Phone: 908-752-5900
Responsible Party:
Name: Known Company: HOME DEPOT

MARY KAY COSMETICS (Continued) **U003159028**

Contact:	SCOTT KAMELT	Title:	SUPER
Address:	3100 HAMILTON BLVD SOUTH PLAINFIELD, NJ		
County:	MIDDLESEX	Phone:	908-752-5900
NJ Spill:			
Name:	Not reported	Title:	Not reported
Phone:	Not reported		
Date:	Not reported	Time:	Not reported
Local Municipality:			
Name:	SOUTH PLAINFIELD B	Title:	OPR 4730
Phone:	908-755-0700		
Date:	11/11/1995	Time:	13:44
Other:			
Name:	Not reported	Title:	Not reported
Phone:	Not reported		
Date:	Not reported	Time:	Not reported
Incident:			
Name:	Not reported	Referred To:	DRPSR
Region:	BFO-CAS	Telephone:	Faxed,Mailed
Date:	11/11/1995	Incident Time:	Not reported
ITM:	B		

Incident Description:	Spill
Wind Direction/Speed:	Not reported
Assistance Requested:	No
Date A310 Letter Printed:	Not reported
Date Local Authority Was Notified:	Not reported
Date Update:	Not reported
Date Report Faxed to Local Authority:	Not reported
Local Authority Notification Date 1:	Not reported
Local Authority Notification Date 2:	Not reported
Local Authority Notification Date 3:	Not reported
Status at Spill:	SPILL DUE TO BROKEN LIFT.CLEAN UP BEING DONE BY ENVIRO PRODUCTS & SERVICES
Comments:	Not reported

MARY KAY COSMETICS (Continued) **U003159028**

UST:

Facility ID:	0166917	Facility Status:	Inactive
Install Date:	1/1/69 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	2.00	Owner Tank ID:	0002

Operator:	Not reported
Operator Address:	Not reported
Owner:	768 BROAD CORP
Owner Address:	220 SOUTH ORANGE AVE SUITE 201 LIVINGSTON, NJ 07039
Tank Capacity:	20.00 Gallons
Tank Contents:	H. HOME HEATING OIL (NO. 2)
Tank Construction:	A. BARE STEEL
Tank Structure:	A. SINGLE WALL
Pipe Contents:	H. OTHER: COPPER
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0166917	Facility Status:	Inactive
Install Date:	1/1/79 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	1.00	Owner Tank ID:	0001

Operator:	Not reported
Operator Address:	Not reported
Owner:	768 BROAD CORP
Owner Address:	220 SOUTH ORANGE AVE SUITE 201 LIVINGSTON, NJ 07039
Tank Capacity:	20000.00 Gallons
Tank Contents:	H. HOME HEATING OIL (NO. 2)
Tank Construction:	D. FIBERGLASS-REINFORCED PLASTIC
Tank Structure:	A. SINGLE WALL A. SINGLE WALL
Pipe Contents:	A. BARE STEEL
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

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58 SW 1/2-1 2745 Higher — **LEND LEASE TRUCKS INCORPORATED**, **4305 NEW BRUNSWICK AVE**, **SOUTH PLAINFIELD BOROUGH, NJ** — **SHWS** — **S103031231**, **N/A**

LEND LEASE TRUCKS INCORPORATED (Continued) — **S103031231**

SHWS:
Facility ID: NJD981561228 — Case ID: 0061193
Case Status: ACTIVE — Status Date: 07/03/1997
Contact: BUST
Facility Status: OPEN
CEA/DER: Not reported

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59 North 1/2-1 3169 Same

SILVERLINE BUILDING CORPORATION
105 TO 109 SYLVANIA PL
SOUTH PLAINFIELD BOROUGH, NJ

SHWS — **S102507853** / **N/A**

SHWS:
Facility ID: NJL500046867 — Case ID: E95102
Case Status: ACTIVE — Status Date: 01/10/1997
Contact: BEECRA
Facility Status: OPEN
CEA/DER: Not reported

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60 SW 1/2-1 3221 Higher

SHELL SERVICE STATION
780 STELTON RD
PISCATAWAY, NJ 08854

RCRIS-SQG — **1000288187**
FINDS — **NJD981181183**
UST
SHWS
LUST

RCRIS:
Owner: SHELL OIL CO
(212) 555-1212
Contact: FRED TRUEDINGER
(908) 325-5316
Record Date: 02/12/1986
Classification: Not reported
Used Oil Recyc: No
Violation Status: No violations found

SHWS:
Facility ID: NJD981185325 — Case ID: 0052409
Case Status: ACTIVE — Status Date: 02/01/1983
Contact: BUST
Facility Status: OPEN
CEA/DER: Not reported

LUST:
Facility ID: 83-02-01-002
Facility Status: Assigned to a Program
UST ID: 0052409
Lead Program Assigned to Case: Bureau of Underground Storage Tanks
CSL ID: Not reported
TMS Number: Not reported
Remecdial Level: C2
Case Manager: RW
Web Data Case Manager: Rene Wright

SHELL SERVICE STATION (Continued) **1000288187**

UST:

Facility ID:	0052409	Facility Status:	Active
Install Date:	1/1/87 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	7.00	Owner Tank ID:	E7

Operator: Not reported
Operator Address: Not reported
Owner: MOTIVA LLC E
Owner Address: HARTFORD TERMINAL - 211 RIVERSIDE DR
ATTN ADRIENNE CERGNIGLIA
E HARTFORD, CT 06118
Tank Capacity: 12000.00 Gallons
Tank Contents: B. Unleaded Gasoline
Tank Construction: D. Fiberglass-reinforced plastic
Tank Structure: A. Single Wall
Pipe Contents: D. Fiberglass-reinforced plastic
Pipe Structure: A. Single Wall
Over Fill Products: Yes
Spill Containment Around Fill Pipe: Yes
Tank Status: A. In-use
Date Tank Removed: Not reported
Date Tank Abandoned in Place: Not reported
Date Tank Taken Out of Service: Not reported
Date of Tank Sale or Transfer: Not reported
Tank Closure Number: Not reported
Tank ISRA Number: Not reported
Tank in Wellhead Protection Area: Not reported
Is Facility in Compliance Rules: 1

Facility ID:	0052409	Facility Status:	Active
Install Date:	1/1/87 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	6.00	Owner Tank ID:	E6

Operator: Not reported
Operator Address: Not reported
Owner: MOTIVA LLC E
Owner Address: HARTFORD TERMINAL - 211 RIVERSIDE DR
ATTN ADRIENNE CERGNIGLIA
E HARTFORD, CT 06118
Tank Capacity: 12000.00 Gallons
Tank Contents: B. Unleaded Gasoline
Tank Construction: D. Fiberglass-reinforced plastic
Tank Structure: A. Single Wall
Pipe Contents: D. Fiberglass-reinforced plastic
Pipe Structure: A. Single Wall
Over Fill Products: Yes
Spill Containment Around Fill Pipe: Yes
Tank Status: A. In-use
Date Tank Removed: Not reported
Date Tank Abandoned in Place: Not reported
Date Tank Taken Out of Service: Not reported
Date of Tank Sale or Transfer: Not reported
Tank Closure Number: Not reported
Tank ISRA Number: Not reported
Tank in Wellhead Protection Area: Not reported
Is Facility in Compliance Rules: 1

SHELL SERVICE STATION (Continued) **1000288187**

Facility ID:	0052409	Facility Status:	Active
Install Date:	1/1/87 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	5.00	Owner Tank ID:	E5

Operator:	Not reported
Operator Address:	Not reported
Owner:	MOTIVA LLC E
Owner Address:	HARTFORD TERMINAL - 211 RIVERSIDE DR ATTN ADRIENNE CERGNIGLIA E HARTFORD, CT 06118
Tank Capacity:	12000.00 Gallons
Tank Contents:	B. Unleaded Gasoline
Tank Construction:	D. Fiberglass-reinforced plastic
Tank Structure:	A. Single Wall
Pipe Contents:	D. Fiberglass-reinforced plastic
Pipe Structure:	A. Single Wall
Over Fill Products:	Yes
Spill Containment Around Fill Pipe:	Yes
Tank Status:	A. In-use
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	1

Facility ID:	0052409	Facility Status:	Active
Install Date:	1/1/81 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	2.00	Owner Tank ID:	E2

Operator:	Not reported
Operator Address:	Not reported
Owner:	MOTIVA LLC E
Owner Address:	HARTFORD TERMINAL - 211 RIVERSIDE DR ATTN ADRIENNE CERGNIGLIA E HARTFORD, CT 06118
Tank Capacity:	8000.00 Gallons
Tank Contents:	A. LEADED GASOLINE
Tank Construction:	D. FIBERGLASS-REINFORCED PLASTIC
Tank Structure:	A. SINGLE WALL
Pipe Contents:	D. FIBERGLASS-REINFORCED PLASTIC
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	1

SHELL SERVICE STATION (Continued) 1000288187

Facility ID:	0052409	Facility Status:	Active
Install Date:	1/1/81 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	3.00	Owner Tank ID:	E3

Operator:	Not reported
Operator Address:	Not reported
Owner:	MOTIVA LLC E
Owner Address:	HARTFORD TERMINAL - 211 RIVERSIDE DR ATTN ADRIENNE CERGNIGLIA E HARTFORD, CT 06118
Tank Capacity:	8000.00 Gallons
Tank Contents:	B. UNLEADED GASOLINE
Tank Construction:	D. FIBERGLASS-REINFORCED PLASTIC
Tank Structure:	A. SINGLE WALL
Pipe Contents:	D. FIBERGLASS-REINFORCED PLASTIC
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	1

Facility ID:	0052409	Facility Status:	Active
Install Date:	1/1/79 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	1.00	Owner Tank ID:	E1

Operator:	Not reported
Operator Address:	Not reported
Owner:	MOTIVA LLC E
Owner Address:	HARTFORD TERMINAL - 211 RIVERSIDE DR ATTN ADRIENNE CERGNIGLIA E HARTFORD, CT 06118
Tank Capacity:	10000.00 Gallons
Tank Contents:	B. UNLEADED GASOLINE
Tank Construction:	D. FIBERGLASS-REINFORCED PLASTIC
Tank Structure:	A. SINGLE WALL
Pipe Contents:	D. FIBERGLASS-REINFORCED PLASTIC
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	1

SHELL SERVICE STATION (Continued) **1000288187**

Facility ID:	0052409	Facility Status:	Active
Install Date:	1/1/87 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	4.00	Owner Tank ID:	E4

Operator:	Not reported
Operator Address:	Not reported
Owner:	MOTIVA LLC E
Owner Address:	HARTFORD TERMINAL - 211 RIVERSIDE DR ATTN ADRIENNE CERGNIGLIA E HARTFORD, CT 06118
Tank Capacity:	550.00 Gallons
Tank Contents:	F. WASTE OIL
Tank Construction:	B. CATHODICALLY PROTECTED STEEL
Tank Structure:	A. SINGLE WALL
Pipe Contents:	B. CATHODICALLY PROTECTED STEEL
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	1

61
North
1/2-1
3268
Lower

AMERICAN STEEL ERECTURS INC — **UST** **U002157004**
1501 JERSEY ST — **SHWS** **N/A**
S PLAINFIELD, NJ 07080

SHWS:

Facility ID:	NJC876004813	Case ID:	0249528
Case Status:	NFA	Status Date:	10/18/1996
Contact:	BUST		
Facility Status:	CLOSED		
CEA/DER:	Not reported		

AMERICAN STEEL ERECTURS INC (Continued) **U002157004**

UST:

Facility ID:	0249528	Facility Status:	Inactive
Install Date:	1/1/71 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	1.00	Owner Tank ID:	E1

Operator:	Not reported
Operator Address:	Not reported
Owner:	AMERICAN STEEL ERECTURS INC
Owner Address:	1501 JERSEY ST S PLAINFIELD, NJ 07080
Tank Capacity:	1000.00 Gallons
Tank Contents:	D. LIGHT DIESEL FUEL (NO. 1-D)
Tank Construction:	A. BARE STEEL
Tank Structure:	A. SINGLE WALL
Pipe Contents:	A. BARE STEEL
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED 10/19/93 C93-3550
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0249528	Facility Status:	Inactive
Install Date:	1/1/71 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	2.00	Owner Tank ID:	E2

Operator:	Not reported
Operator Address:	Not reported
Owner:	AMERICAN STEEL ERECTURS INC
Owner Address:	1501 JERSEY ST S PLAINFIELD, NJ 07080
Tank Capacity:	1000.00 Gallons
Tank Contents:	A. LEADED GASOLINE
Tank Construction:	A. BARE STEEL
Tank Structure:	A. SINGLE WALL
Pipe Contents:	A. BARE STEEL
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED 10/19/93 C93-3550
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

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62 East 1/2-1 3501 Higher

BORO AUTO WRECKERS
2271 HAMILTON BLVD
SOUTH PLAINFIEL, NJ 07080

FINDS 1000324093
RCRIS-LQG NJD091397299
SHWS

BORO AUTO WRECKERS (Continued) **1000324093**

RCRIS:
Owner: FRED ERICKSON
(212) 555-1212

Contact: FRED ERICKSON
(908) 756-3584

Record Date: 05/29/1986

Classification: Large Quantity Generator

Used Oil Recyc: No

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
AIRS Facility System (AIRS/AFS)
Permit Compliance System (PCS)

SHWS:
Facility ID: NJD091397299
Case Status: ACTIVE
Contact: BSCM
Facility Status: OPEN
CEA/DER: Not reported
Case ID: NJD091397299
Status Date: 09/20/1988

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63 SSW 1/2-1 3513 Higher | **SHELL SERVICE STATION**
1649 STELTON RD
PISCATAWAY, NJ 07052 | **UST** **U000364529**
SHWS **N/A**

SHWS:
Facility ID: NJD981177751
Case Status: ACTIVE
Contact: BUST
Facility Status: OPEN
CEA/DER: Not reported
Case ID: 0157313
Status Date: 11/13/1995

SHELL SERVICE STATION (Continued) **U000364529**

UST:

Facility ID:	0157313	Facility Status:	Active
Install Date:	1/1/77 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	1.00	Owner Tank ID:	E1

Operator: Not reported
Operator Address: Not reported
Owner: MOTIVA LLC EAST
Owner Address: HARTFORD TERMINAL - 211 RIVERSIDE DR
ATTN ADRIENNE CERGNIGLIA
E HARTFORD, CT 06118
Tank Capacity: 10000.00 Gallons
Tank Contents: B. Unleaded Gasoline
Tank Construction: D. Fiberglass-reinforced plastic
Tank Structure: A. Single Wall
Pipe Contents: D. Fiberglass-reinforced plastic
Pipe Structure: A. Single Wall
Over Fill Products: Yes
Spill Containment Around Fill Pipe: Yes
Tank Status: A. In-use
Date Tank Removed: Not reported
Date Tank Abandoned in Place: Not reported
Date Tank Taken Out of Service: Not reported
Date of Tank Sale or Transfer: Not reported
Tank Closure Number: Not reported
Tank ISRA Number: Not reported
Tank in Wellhead Protection Area: Not reported
Is Facility in Compliance Rules: 1

Facility ID:	0157313	Facility Status:	Active
Install Date:	1/1/77 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	2.00	Owner Tank ID:	E2

Operator: Not reported
Operator Address: Not reported
Owner: MOTIVA LLC EAST
Owner Address: HARTFORD TERMINAL - 211 RIVERSIDE DR
ATTN ADRIENNE CERGNIGLIA
E HARTFORD, CT 06118
Tank Capacity: 10000.00 Gallons
Tank Contents: B. Unleaded Gasoline
Tank Construction: D. Fiberglass-reinforced plastic
Tank Structure: A. Single Wall
Pipe Contents: D. Fiberglass-reinforced plastic
Pipe Structure: A. Single Wall
Over Fill Products: Yes
Spill Containment Around Fill Pipe: Yes
Tank Status: A. In-use
Date Tank Removed: Not reported
Date Tank Abandoned in Place: Not reported
Date Tank Taken Out of Service: Not reported
Date of Tank Sale or Transfer: Not reported
Tank Closure Number: Not reported
Tank ISRA Number: Not reported
Tank in Wellhead Protection Area: Not reported
Is Facility in Compliance Rules: 1

SHELL SERVICE STATION (Continued) **U000364529**

Facility ID:	0157313	Facility Status:	Active
Install Date:	1/1/77 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	3.00	Owner Tank ID:	E3

Operator:	Not reported
Operator Address:	Not reported
Owner:	MOTIVA LLC EAST
Owner Address:	HARTFORD TERMINAL - 211 RIVERSIDE DR ATTN ADRIENNE CERGNIGLIA E HARTFORD, CT 06118
Tank Capacity:	8000.00 Gallons
Tank Contents:	B. Unleaded Gasoline
Tank Construction:	D. Fiberglass-reinforced plastic
Tank Structure:	A. Single Wall
Pipe Contents:	D. Fiberglass-reinforced plastic
Pipe Structure:	A. Single Wall
Over Fill Products:	Yes
Spill Containment Around Fill Pipe:	Yes
Tank Status:	A. In-use
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	1

Facility ID:	01573[illegible]	Facility Status:	Active
Install Date:	1/1/87 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	4.00	Owner Tank ID:	E4

Operator:	Not reported
Operator Address:	Not reported
Owner:	MOTIVA LLC EAST
Owner Address:	HARTFORD TERMINAL - 211 RIVERSIDE DR ATTN ADRIENNE CERGNIGLIA E HARTFORD, CT 06118
Tank Capacity:	550.00 Gallons
Tank Contents:	F. WASTE OIL
Tank Construction:	D. FIBERGLASS-REINFORCED PLASTIC
Tank Structure:	A. SINGLE WALL
Pipe Contents:	D. FIBERGLASS-REINFORCED PLASTIC
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED 12/10/93 C92-4720
Date Tank Removed:	12/10/93 0:00:00
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	C92-4720
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	1

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
64 WSW 1/2-1 3518 Higher	SUN BELT PARTNERS INC 571 STELTON RD PISCATAWAY, NJ	NJ Spills NJ Release SHWS	S101205621 N/A

SHWS:

Facility ID:	NJD986611861	Case ID:	0018579
Case Status:	ACTIVE	Status Date:	06/05/1990
Contact:	BUST		
Facilty Status:	OPEN		
CEA/DER:	Not reported		

NJ Release:

Facility ID:	17719	Case Number:	94-9-30-1443-59
Date Received:	09/30/1994	Operator:	JOES
Location:	Facility	Nature of Incident:	Facility
Facility Phone:	908-752-2929	Facility Type:	Commercial
Date of Incident:	Not reported	Time of Incident:	UNK
Substance(s):	PESTICIDE, LIQUID		
Substance Type:	Liquid	Substance Identity:	Known
A310 Letter:	Yes	TCPA Chemical:	No
Hazrds Material:	Yes	CAS Number:	Not reported
COMU:	1217	Ref. Code:	101
Amnt Released:	UNK	Release VE:	Not reported
Release Type:	Terminated	Contained:	No
Injuries:	No	Facility Evacuation:	No
Public Exposure:	No	Public Evacuation:	No
Police at Scene:	No	Firemen at Scene:	No
Contamination of:	Land	Receiving Water:	Not reported
Caller:			
Name:	JAY JAFFE	Title:	LAWYER
Address:	Not reported		
Telephone:	908-789-8550		
Responsible Party:			
Name:	Known	Company:	SUN BELT PARTNERS IN
Contact:	SKIP MOORE	Title:	OFFICER
Address:	571 STELTON RD PISCATAWAY, NJ		
County:	MIDDLESEX	Telephone:	908-752-2929
NJ Spill:			
Name:	Not reported	Title:	Not reported
Telephone:	Not reported		
Date:	Not reported	Time:	Not reported
Local Municipality:			
Name:	PISCATAWAY TWP	Municipality Title:	DISP 5021
Telephone:	908-562-1100		
Date:	09/30/1994	Time:	14:54
Other:			
Name:	Not reported	Title:	Not reported
Telephone:	Not reported		
Date:	Not reported	Time:	Not reported
Incident:			
Name:	Not reported	Referred To:	DRPSR
Region:	BFO-CAS	Telephone:	Faxed,Mailed
Date:	09/30/1994	Incident Time:	Not reported
ITM:	B		
Name:	Not reported	Referred To:	ESHA
Region:	PESTICIDE	Telephone:	Faxed
Date:	09/30/1994	Incident Time:	Not reported

SUN BELT PARTNERS INC (Continued) **S101205621**

ITM: T
Incident Description: Spill,Soil Contamination
Wind Direction/Speed: Not reported
Assistance Requested: No
Date A310 Letter Printed: 09/30/1994
Date Local Authority Was Notified: Not reported
Date Update: Not reported
Date Report Faxed to Local Authority: 09/30/1994
Local Authority Notification Date 1: Not reported
Local Authority Notification Date 2: Not reported
Local Authority Notification Date 3: Not reported
Status at Spill: SOIL SAMPLES TAKEN SHOWED SMALL AMTS OF PESTICIDE IN AREA OF WHERE TRUCKS PARK,CLEANUP WILL BE DONE.SAMPLE DATE UNK.
Comments: TRUCK OWNER,BASLER WEED CONTROL,336 PENFIELD PLACE,DUNELLEN NJ 08812. DAVID BASLER.OWNER 908-752-8918

NJ Spill:

Facility ID:	17719	Case Number:	94-9-30-1443-59
Date Received:	09/30/1994	Operator:	JOES
Location:	Facility	Nature of Incident:	Facility
Facility Phone:	908-752-2929	Facility Type:	Commercial
Date of Incident:	Not reported	Time of Incident:	UNK
Substance(s):	PESTICIDE, LIQUID		
Substance Type:	Liquid	Substance Identity:	Known
A310 Letter:	Yes	TCPA Chemical:	No
Hazrds Material:	Yes	CAS Number:	Not reported
COMU:	1217	Ref. Code:	101
Amnt Released:	UNK	Release VE:	Not reported
Release Type:	Terminated	Contained:	No
Injuries:	No	Facility Evacuation:	No
Public Exposure:	No	Public Evacuation:	No
Police at Scene:	No	Firemen at Scene:	No
Contamination of:	Land	Receiving Water:	Not reported

Caller:

Name:	JAY JAFFE	Title:	LAWYER
Address:	Not reported		
Phone:	908-789-8550		

Responsible Party:

Name:	Known	Company:	SUN BELT PARTNERS IN
Contact:	SKIP MOORE	Title:	OFFICER
Address:	571 STELTON RD PISCATAWAY, NJ		
County:	MIDDLESEX	Phone:	908-752-2929

NJ Spill:

Name:	Not reported	Title:	Not reported
Phone:	Not reported		
Date:	Not reported	Time:	Not reported

Local Municipality:

Name:	PISCATAWAY TWP	Title:	DISP 5021
Phone:	908-562-1100		
Date:	09/30/1994	Time:	14:54

Other:

Name:	Not reported	Title:	Not reported
Phone:	Not reported		
Date:	Not reported	Time:	Not reported

Incident:

Name:	Not reported	Referred To:	DRPSR
Region:	BFO-CAS	Telephone:	Faxed,Mailed

SUN BELT PARTNERS INC (Continued) **S101205621**

Date:	09/30/1994	Incident Time:	Not reported
ITM:	B		
Name:	Not reported	Referred To:	ESHA
Region:	PESTICIDE	Telephone:	Not reported
Date:	09/30/1994	Incident Time:	Not reported
ITM:	T		
Name:	Not reported	Referred To:	ESHA
Region:	Not reported	Telephone:	Not reported
Date:	Not reported	Incident Time:	Not reported
ITM:	Not reported		

Incident Description: Spill,Soil Contamination
Wind Direction/Speed: Not reported
Assistance Requested: No
Date A310 Letter Printed: 09/30/1994
Date Local Authority Was Notified: Not reported
Date Update: Not reported
Date Report Faxed to Local Authority: 09/30/1994
Local Authority Notification Date 1: Not reported
Local Authority Notification Date 2: Not reported
Local Authority Notification Date 3: Not reported
Status at Spill: SOIL SAMPLES TAKEN SHOWED SMALL AMTS OF PESTICIDE IN AREA OF WHERE TRUCKS PARK,CLEANUP WILL BE DONE.SAMPLE DATE UNK.
Comments: TRUCK OWNER,BASLER WEED CONTROL,336 PENFIELD PLACE,DUNELLEN NJ 08812. DAVID BASLER.OWNER 908-752-8918

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65 ESE 1/2-1 3521 Higher — **LYNN STEEL CORP**, **235 ST NICHOLAS AVE**, **SOUTH PLAINFIEL, NJ 07080** — **RCRIS-SQG, FINDS, UST, SHWS** — **1000306101, NJD020768123**

RCRIS:
Owner: WILLIAM F LYNCH SR
(212) 555-1212
Contact: KEN ZIMMERMAN
(908) 561-5800
Record Date: 09/15/1986
Classification: Not reported
Used Oil Recyc: No
Violation Status: No violations found

SHWS:

Facility ID:	NJL000038455	Case ID:	881
Case Status:	ACTIVE	Status Date:	08/03/1990
Contact:	BUST		
Facilty Status:	OPEN		
CEA/DER:	Not reported		

LYNN STEEL CORP (Continued) **1000306101**

UST:

Facility ID:	0271910	Facility Status:	Inactive
Install Date:	1/1/76 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	1.00	Owner Tank ID:	E1

Operator:	Not reported
Operator Address:	Not reported
Owner:	WILLIAM F. LYNCH
Owner Address:	235 ST. NICHOLAS AVENUE SOUTH PLAINFIELD, NJ 07080
Tank Capacity:	2000.00 Gallons
Tank Contents:	H. HOME HEATING OIL (NO. 2)
Tank Construction:	A. BARE STEEL
Tank Structure:	C. OTHER
Pipe Contents:	H. OTHER: COPPER TUBING
Pipe Structure:	C. OTHER
Over Fill Products:	Yes
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED 6/15/90
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0271910	Facility Status:	Inactive
Install Date:	1/1/82 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	2.00	Owner Tank ID:	E2

Operator:	Not reported
Operator Address:	Not reported
Owner:	WILLIAM F. LYNCH
Owner Address:	235 ST. NICHOLAS AVENUE SOUTH PLAINFIELD, NJ 07080
Tank Capacity:	2000.00 Gallons
Tank Contents:	H. HOME HEATING OIL (NO. 2)
Tank Construction:	A. BARE STEEL
Tank Structure:	C. OTHER
Pipe Contents:	H. OTHER: COPPER TUBING
Pipe Structure:	C. OTHER
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED 6/15/90
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

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66 **EXXON SERVICE STATION PISCATAWAY TWP** **SHWS** **S103033513**
SSW **1000 STELTON RD** **N/A**
1/2-1 **PISCATAWAY TOWNSHIP, NJ**
4084
Higher

EXXON SERVICE STATION PISCATAWAY TWP (Continued) **S103033513**

SHWS:
Facility ID: NJD986600047
Case ID: 0091406
Case Status: NFA-A
Status Date: 03/11/1997
Contact: BUST
Facility Status: CLOSED
CEA/DER: CEA - Classification Exeption Area

N67 North 1/2-1 4327 Lower

BARCLAY BRAND CORP
2401 S CLINTON AVE
SOUTH PLAINFIEL, NJ 07080

FINDS 1000173913
RCRIS-LQG NJD982532848
UST
SHWS
LUST

RCRIS:
Owner: BARCLAY BRAND CORP
(212) 555-1212
Contact: EDITH MONROE
(908) 561-2100
Record Date: 03/07/1988
Classification: Large Quantity Generator, Small Quantity Generator
Used Oil Recyc: No
Violation Status: Violation information exist

There are 2 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Schedule Evaluation (CSE)	Generator-All Requirements	12/01/1994
	Generator-All Requirements	12/01/1994
Compliance Evaluation Inspection (CEI)	Generator-All Requirements	12/01/1994
	Generator-All Requirements	12/01/1994

SHWS:
Facility ID: NJD982532848
Case ID: 0090858
Case Status: ACTIVE
Status Date: 06/09/1994
Contact: BUST
Facility Status: OPEN
CEA/DER: Not reported

LUST:
Facility ID: 92-12-16-1436
Facility Status: Assigned to a Program
UST ID: 0090858
Lead Program Assigned to Case: Bureau of Underground Storage Tanks
CSL ID: Not reported
TMS Number: C92-4008
Remecdial Level: C2
Case Manager: DN
Web Data Case Manager: David Nickerson

BARCLAY BRAND CORP (Continued) — **1000173913**

UST:

Facility ID:	0090858	Facility Status:	Inactive
Install Date:	1/1/80 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	1.00	Owner Tank ID:	0001

Operator:	Not reported
Operator Address:	Not reported
Owner:	WILLIAM A BRAND III
Owner Address:	2401 S CLINTON AVE S PLAINFIELD, NJ 07080
Tank Capacity:	4000.00 Gallons
Tank Contents:	B. UNLEADED GASOLINE
Tank Construction:	A. BARE STEEL
Tank Structure:	A. SINGLE WALL
Pipe Contents:	H. OTHER
Pipe Structure:	Not reported
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED 12/16/92 C92-4008
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank In Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

N68 North 1/2-1 4358 Lower — **ECO PUMP CORPORATION**, **2387 CLINTON AVE**, **SOUTH PLAINFIELD BOROUGH, NJ** — **SHWS** — **S103031229** / **N/A**

SHWS:

Facility ID:	NJD002141331	Case ID:	E84409
Case Status:	ACTIVE	Status Date:	03/15/1991
Contact:	BEECRA		
Facility Status:	OPEN		
CEA/DER:	Not reported		

N69 North 1/2-1 4414 Lower — **JONATHAN PROPERTIES**, **2364 S CLINTON AVE**, **S PLAINFIELD, NJ 07080** — **UST**, **SHWS** — **U000367589** / **N/A**

SHWS:

Facility ID:	NJL600199194	Case ID:	0020314
Case Status:	ACTIVE	Status Date:	03/06/1992
Contact:	BUST		
Facility Status:	OPEN		
CEA/DER:	Not reported		

JONATHAN PROPERTIES (Continued) **U000367589**

UST:

Facility ID:	0020314	Facility Status:	Inactive
Install Date:	1/1/77 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	2.00	Owner Tank ID:	E2

Operator:	Not reported
Operator Address:	Not reported
Owner:	JONATHAN PROPERTIES
Owner Address:	118 ST NICHOLAS AVE SOUTH PLAINFIELD, NJ 07080
Tank Capacity:	2000.00 Gallons
Tank Contents:	B. UNLEADED GASOLINE
Tank Construction:	A. BARE STEEL
Tank Structure:	A. SINGLE WALL
Pipe Contents:	H. OTHER
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED PRIOR TO JULY/90 PROPERT
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0020314	Facility Status:	Inactive
Install Date:	1/1/77 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	3.00	Owner Tank ID:	E3

Operator:	Not reported
Operator Address:	Not reported
Owner:	JONATHAN PROPERTIES
Owner Address:	118 ST NICHOLAS AVE SOUTH PLAINFIELD, NJ 07080
Tank Capacity:	3000.00 Gallons
Tank Contents:	H. HOME HEATING OIL (NO. 2)
Tank Construction:	A. BARE STEEL
Tank Structure:	A. SINGLE WALL
Pipe Contents:	H. OTHER
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED 2/10/92C92-0022
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	C92-0022
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

JONATHAN PROPERTIES (Continued) — **U000367589**

Facility ID:	0020314	Facility Status:	Inactive
Install Date:	1/1/77 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	1.00	Owner Tank ID:	E1

Operator:	Not reported
Operator Address:	Not reported
Owner:	JONATHAN PROPERTIES
Owner Address:	118 ST NICHOLAS AVE SOUTH PLAINFIELD, NJ 07080
Tank Capacity:	2000.00 Gallons
Tank Contents:	E. MEDIUM DIESEL FUEL (NO. 2-D)
Tank Construction:	A. BARE STEEL
Tank Structure:	A. SINGLE WALL
Pipe Contents:	H. OTHER
Pipe Structure:	A. SINGLE WALL
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED 2/10/92 C92-0022
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	C92-0022
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

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70 North 1/2-1 4593 Lower — **CF MOTOR FREIGHT**, **105 NEW ERA DR**, **SOUTH PLAINFIELD BOROUGH, NJ** — **SHWS** — **S103031225** / **N/A**

SHWS:

Facility ID:	NJL800155095	Case ID:	0128838
Case Status:	ACTIVE	Status Date:	10/19/1995
Contact:	BUST		
Facilty Status:	OPEN		
CEA/DER:	Not reported		

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71 South 1/2-1 4674 Higher — **SUNOCO**, **1028 STELTON RD**, **PISCATAWAY, NJ** — **NJ Spills**, **NJ Release**, **SHWS** — **S101208745** / **N/A**

SHWS:

Facility ID:	NJD980650170	Case ID:	9303165
Case Status:	PENDING	Status Date:	03/30/1993
Contact:	BFO-S		
Facilty Status:	OPEN		
CEA/DER:	Not reported		

NJ Release:

Facility ID:	12990	Case Number:	95-8-16-1124-41
Date Received:	08/16/1995	Operator:	JULIE1
Location:	Facility	Nature of Incident:	Other
Facility Phone:	Not reported	Facility Type:	Commercial
Date of Incident:	08/10/1995	Time of Incident:	09:30

SUNOCO (Continued) **S101208745**

Substance(s): GASOLINE
Substance Type: Liquid
Substance Identity: Known
A310 Letter: Yes
TCPA Chemical: No
Hazrds Material: Yes
CAS Number: Not reported
COMU: 1217
Ref. Code: 101
Amnt Released: UNKNOWN
Release VE: Not reported
Release Type: Terminated
Contained: Yes
Injuries: No
Facility Evacuation: No
Public Exposure: No
Public Evacuation: No
Police at Scene: No
Firemen at Scene: No
Contamination of: Land
Receiving Water: NONE
Caller:
Name: GREGG CASABONA
Title: HANDEX
Address: NJ
Telephone: 908-536-8500
Responsible Party:
Name: Known
Company: SUN COMP INC
Contact: RUSSEL HAMMOND
Title: ENVIRO ENG
Address: 70 EAST AVE
LAWRENCE/11559, NY
County: Not reported
Telephone: 516-239-2431
NJ Spill:
Name: Not reported
Title: Not reported
Telephone: Not reported
Date: Not reported
Time: Not reported
Local Municipality:
Name: PISCATAWAY TWP
Municipality Title: OPR 5021
Telephone: 908-562-1100
Date: 08/16/1995
Time: 11:29
Other:
Name: Not reported
Title: Not reported
Telephone: Not reported
Date: Not reported
Time: Not reported
Incident:
Name: Not reported
Referred To: DRPSR
Region: BFO-CAS
Telephone: Faxed,Mailed
Date: 08/16/1995
Incident Time: Not reported
ITM: B
Incident Description: Soil Contamination
Wind Direction/Speed: Not reported
Assistance Requested: No
Date A310 Letter Printed: Not reported
Date Local Authority Was Notified: Not reported
Date Update: Not reported
Date Report Faxed to Local Authority: Not reported
Local Authority Notification Date 1: Not reported
Local Authority Notification Date 2: Not reported
Local Authority Notification Date 3: Not reported
Status at Spill: SOIL CONTAMINATION FOUND DURING EXCAVATION OF PREVIOUSLY CONTAMINATED SITE.FURTHER CLEAN UP BEING DONE.REF CASE 92-12-14-1019
Comments: CHART H

NJ Spill:
Facility ID: 36
Case Number: 95-1-2-1137-00
Date Received: 01/02/1995
Operator: JIMS
Location: Facility
Nature of Incident: Facility
Facility Phone: 908-981-0659
Facility Type: Industrial
Date of Incident: 01/02/1995
Time of Incident: 10:40

SUNOCO (Continued) S101208745

Substance(s):	OIL MOTOR		
Substance Type:	Liquid	Substance Identity:	Known
A310 Letter:	Yes	TCPA Chemical:	No
Hazrds Material:	Yes	CAS Number:	Not reported
COMU:	1217	Ref. Code:	101
Amnt Released:	2 GAL	Release VE:	Estimate
Release Type:	Terminated	Contained:	Yes
Injuries:	No	Facility Evacuation:	No
Public Exposure:	No	Public Evacuation:	No
Police at Scene:	Yes	Firemen at Scene:	No
Contamination of:	Land	Receiving Water:	Not reported
Caller:			
Name:	DOMINIC RUSSO	Title:	SUNOCO
Address:	1028 STELTON RD PISCATAWAY, NJ		
Phone:	908-981-0659		
Responsible Party:			
Name:	Known	Company:	RYBACK TRUCKING
Contact:	GREG RYBACK	Title:	OWNER
Address:	STANFORD, CT		
County:	Not reported	Phone:	Not reported
NJ Spill:			
Name:	Not reported	Title:	Not reported
Phone:	Not reported		
Date:	Not reported	Time:	Not reported
Local Municipality:			
Name:	PISCATAWAY TWP	Title:	OPR.#5001
Phone:	908-562-1100		
Date:	01/02/1995	Time:	11:47
Other:			
Name:	Not reported	Title:	Not reported
Phone:	Not reported		
Date:	Not reported	Time:	Not reported
Incident:			
Name:	Not reported	Referred To:	DRPSR
Region:	BFO-CAS	Telephone:	Faxed,Mailed
Date:	01/02/1995	Incident Time:	Not reported
ITM:	B		

Incident Description:	Spill
Wind Direction/Speed:	Not reported
Assistance Requested:	No
Date A310 Letter Printed:	Not reported
Date Local Authority Was Notified:	Not reported
Date Update:	Not reported
Date Report Faxed to Local Authority:	Not reported
Local Authority Notification Date 1:	Not reported
Local Authority Notification Date 2:	Not reported
Local Authority Notification Date 3:	Not reported
Status at Spill:	TRACTOR LOST MOTOR OIL WHEN LEAVING SUNOCO FACILITY. CONTRACTOR ON SCENE DOING CLEANUP.
Comments:	Not reported

Facility ID:	12990	Case Number:	95-8-16-1124-41
Date Received:	08/16/1995	Operator:	JULIE1
Location:	Facility	Nature of Incident:	Other
Facility Phone:	Not reported	Facility Type:	Commercial
Date of Incident:	08/10/1995	Time of Incident:	09:30

SUNOCO (Continued) **S101208745**

Substance(s):	GASOLINE		
Substance Type:	Liquid	Substance Identity:	Known
A310 Letter:	Yes	TCPA Chemical:	No
Hazrds Material:	Yes	CAS Number:	Not reported
COMU:	1217	Ref. Code:	101
Amnt Released:	UNKNOWN	Release VE:	Not reported
Release Type:	Terminated	Contained:	Yes
Injuries:	No	Facility Evacuation:	No
Public Exposure:	No	Public Evacuation:	No
Police at Scene:	No	Firemen at Scene:	No
Contamination of:	Land	Receiving Water:	NONE
Caller:			
Name:	GREGG CASABONA	Title:	HANDEX
Address:	NJ		
Phone:	908-536-8500		
Responsible Party:			
Name:	Known	Company:	SUN COMP INC
Contact:	RUSSEL HAMMOND	Title:	ENVIRO ENG
Address:	70 EAST AVE LAWRENCE/11559, NY		
County:	Not reported	Phone:	516-239-2431
NJ Spill:			
Name:	Not reported	Title:	Not reported
Phone:	Not reported		
Date:	Not reported	Time:	Not reported
Local Municipality:			
Name:	PISCATAWAY TWP	Title:	OPR 5021
Phone:	908-562-1100		
Date:	08/16/1995	Time:	11:29
Other:			
Name:	Not reported	Title:	Not reported
Phone:	Not reported		
Date:	Not reported	Time:	Not reported
Incident:			
Name:	Not reported	Referred To:	DRPSR
Region:	BFO-CAS	Telephone:	Faxed,Mailed
Date:	08/16/1995	Incident Time:	Not reported
ITM:	B		

Incident Description:	Soil Contamination
Wind Direction/Speed:	Not reported
Assistance Requested:	No
Date A310 Letter Printed:	Not reported
Date Local Authority Was Notified:	Not reported
Date Update:	Not reported
Date Report Faxed to Local Authority:	Not reported
Local Authority Notification Date 1:	Not reported
Local Authority Notification Date 2:	Not reported
Local Authority Notification Date 3:	Not reported
Status at Spill:	SOIL CONTAMINATION FOUND DURING EXCAVATION OF PREVIOUSLY CONTAMINATED SITE.FURTHER CLEAN UP BEING DONE.REF CASE 92-12-14-1019
Comments:	CHART H

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72 SE 1/2-1 4745 Higher

V TUFARO & SONS INC
225 DURHAM AVE
SOUTH PLAINFIELD, NJ 07080

RCRIS-SQG 1001127723
FINDS NJR000017285
SHWS
LUST

V TUFARO & SONS INC (Continued) **1001127723**

RCRIS:
Owner: WILLIAM CLARK
(908) 756-5146

Contact: WILLIAM CLARK
(908) 756-5146

Record Date: 01/30/1997

Classification: Small Quantity Generator

Used Oil Recyc: No

Violation Status: No violations found

SHWS:
Facility ID: NJL800280596
Case ID: 0100126
Case Status: ACTIVE
Status Date: 05/30/1997
Contact: BUST
Facility Status: OPEN
CEA/DER: Not reported

LUST:
Facility ID: 97-01-07-1001-13
Facility Status: Assigned to a Program
UST ID: 0100126
Lead Program Assigned to Case: Bureau of Underground Storage Tanks
CSL ID: Not reported
TMS Number: C96-0944
Remecdial Level: C2
Case Manager: BP
Web Data Case Manager: Bill Patterson

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73 ESE 1/2-1 4881 Higher | **COLORFUL STORYBOOKS**
2 HOLLYWOOD CT
SOUTH PLAINFIELD, NJ 07080 | **RCRIS-SQG FINDS SHWS** | **1001118976 NJR000013276**

RCRIS:
Owner: J D ASSOCIATES INC
(908) 561-3333

Contact: JACK BLEWITT
(908) 561-3333

Record Date: 07/19/1996

Classification: Small Quantity Generator

Used Oil Recyc: No

Violation Status: No violations found

SHWS:
Facility ID: NJL600219471
Case ID: 0247359
Case Status: NFA
Status Date: 08/29/1996
Contact: BFO-IN
Facility Status: CLOSED
CEA/DER: Not reported

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
74 WSW 1/2-1 5021 Higher	TEXACO STATION 450 STELTON RD PISCATAWAY, NJ	NJ Spills NJ Release SHWS LUST	S101338993 N/A

SHWS:

Facility ID:	NJD986581171	Case ID:	0110846
Case Status:	ACTIVE	Status Date:	02/05/1996
Contact:	BUST		
Facilty Status:	OPEN		
CEA/DER:	Not reported		

LUST:

Facility ID:	93-03-17-1521
Facility Status:	Assigned to a Program
UST ID:	0110846
Lead Program Assigned to Case:	Bureau of Underground Storage Tanks
CSL ID:	Not reported
TMS Number:	S92-1593; C92-1586; C93-0550
Remecdial Level:	C2
Case Manager:	EK
Web Data Case Manager:	Erick Kinsel

NJ Release:

Facility ID:	3957	Case Number:	93-3-17-1521-34
Date Received:	03/17/1993	Operator:	JIMH
Location:	Facility	Nature of Incident:	Facility
Facility Phone:	Not reported	Facility Type:	Commercial
Date of Incident:	03/17/1993	Time of Incident:	Not reported
Substance(s):	GASOLINE		
Substance Type:	Liquid	Substance Identity:	Known
A310 Letter:	Yes	TCPA Chemical:	No
Hazrds Material:	Yes	CAS Number:	Not reported
COMU:	1217	Ref. Code:	101
Amnt Released:	UNK	Release VE:	Not reported
Release Type:	Terminated	Contained:	Yes
Injuries:	No	Facility Evacuation:	No
Public Exposure:	No	Public Evacuation:	No
Police at Scene:	No	Firemen at Scene:	No
Contamination of:	Land	Receiving Water:	Not reported
Caller:			
Name:	MS.BROOKER	Title:	STAR ENTERPRISE
Address:	Not reported		
Telephone:	914=838-7754		
Responsible Party:			
Name:	Known	Company:	STAR ENTERPRISE
Contact:	MS.BROOKER	Title:	E COORDINATO
Address:	450 STELTON RD PISCATWAY, NJ		
County:	MIDDLESEX	Telephone:	Not reported
NJ Spill:			
Name:	Not reported	Title:	Not reported
Telephone:	Not reported		
Date:	Not reported	Time:	Not reported
Local Municipality:			
Name:	PISCATAWAY TWP	Municipality Title:	OPER 5022
Telephone:	908-981-0811		
Date:	03/17/1993	Time:	15:24
Other:			

TEXACO STATION (Continued) **S101338993**

Name: Not reported
Title: Not reported
Telephone: Not reported
Date: Not reported
Time: Not reported
Incident:
Name: Not reported
Referred To: DRPSR
Region: BFO-SA
Telephone: Faxed,Mailed
Date: 03/17/1993
Incident Time: Not reported
ITM: B
Incident Description: L.U.S.T.
Wind Direction/Speed: Not reported
Assistance Requested: No
Date A310 Letter Printed: Not reported
Date Local Authority Was Notified: Not reported
Date Update: Not reported
Date Report Faxed to Local Authority: Not reported
Local Authority Notification Date 1: Not reported
Local Authority Notification Date 2: Not reported
Local Authority Notification Date 3: Not reported
Status at Spill: PIPING REMOVAL ALONG WITH SOIL IN AREA.
Comments: Not reported

NJ Spill:
Facility ID: 3957
Case Number: 93-3-17-1521-34
Date Received: 03/17/1993
Operator: JIMH
Location: Facility
Nature of Incident: Facility
Facility Phone: Not reported
Facility Type: Commercial
Date of Incident: 03/17/1993
Time of Incident: Not reported
Substance(s): GASOLINE
Substance Type: Liquid
Substance Identity: Known
A310 Letter: Yes
TCPA Chemical: No
Hazrds Material: Yes
CAS Number: Not reported
COMU: 1217
Ref. Code: 101
Amnt Released: UNK
Release VE: Not reported
Release Type: Terminated
Contained: Yes
Injuries: No
Facility Evacuation: No
Public Exposure: No
Public Evacuation: No
Police at Scene: No
Firemen at Scene: No
Contamination of: Land
Receiving Water: Not reported
Caller:
Name: MS.BROOKER
Title: STAR ENTERPRISE
Address: Not reported
Phone: 914=838-7754
Responsible Party:
Name: Known
Company: STAR ENTERPRISE
Contact: MS.BROOKER
Title: E COORDINATO
Address: 450 STELTON RD
PISCATWAY, NJ
County: MIDDLESEX
Phone: Not reported
NJ Spill:
Name: Not reported
Title: Not reported
Phone: Not reported
Date: Not reported
Time: Not reported
Local Municipality:
Name: PISCATAWAY TWP
Title: OPER 5022
Phone: 908-981-0811
Date: 03/17/1993
Time: 15:24
Other:
Name: Not reported
Title: Not reported

TEXACO STATION (Continued) — **S101338993**

Phone: Not reported
Date: Not reported — Time: Not reported
Incident:
Name: Not reported — Referred To: DRPSR
Region: BFO-SA — Telephone: Faxed,Mailed
Date: 03/17/1993 — Incident Time: Not reported
ITM: B
Incident Description: L.U.S.T.
Wind Direction/Speed: Not reported
Assistance Requested: No
Date A310 Letter Printed: Not reported
Date Local Authority Was Notified: Not reported
Date Update: Not reported
Date Report Faxed to Local Authority: Not reported
Local Authority Notification Date 1: Not reported
Local Authority Notification Date 2: Not reported
Local Authority Notification Date 3: Not reported
Status at Spill: PIPING REMOVAL ALONG WITH SOIL IN AREA.
Comments: Not reported

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75 North 1/2-1 5156 Lower — **LOOSE LEAF INDUSTRIES INCORPORATED** — SHWS — S103031232 / N/A
2101 PARKER AVE
SOUTH PLAINFIELD BOROUGH, NJ

SHWS:
Facility ID: NJL500045521 — Case ID: E94627
Case Status: ACTIVE — Status Date: 10/31/1994
Contact: BFO-IN
Facility Status: OPEN
CEA/DER: Not reported

O76 NE 1/2-1 5215 Lower — **JOE NICASTRO'S GARAGE** — UST, SHWS, LUST — U000368159 / N/A
720 HAMILTON BLVD
SOUTH PLAINFIELD, NJ 07080

SHWS:
Facility ID: NJL600173868 — Case ID: 0261696
Case Status: ACTIVE — Status Date: 12/02/1991
Contact: BUST
Facility Status: OPEN
CEA/DER: Not reported

LUST:
Facility ID: 91-12-02-1413
Facility Status: Assigned to a Program
UST ID: 0261696
Lead Program Assigned to Case: Bureau of Underground Storage Tanks
CSL ID: Not reported
TMS Number: C91-2395; C91-3480
Remecdial Level: C2
Case Manager: JR
Web Data Case Manager: John Ruhl

JOE NICASTRO'S GARAGE (Continued) **U000368159**

UST:

Facility ID:	0261696	Facility Status:	Inactive
Install Date:	1/1/79 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	1.00	Owner Tank ID:	0001

Operator:	Not reported
Operator Address:	Not reported
Owner:	JOSEPH NICASTRO
Owner Address:	720 HAMILTON BLVD S. PLAINFIELD, NJ 07080
Tank Capacity:	2000.00 Gallons
Tank Contents:	B. UNLEADED GASOLINE
Tank Construction:	H. OTHER:
Tank Structure:	C. OTHER
Pipe Contents:	H. OTHER:
Pipe Structure:	C. OTHER
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0261696	Facility Status:	Inactive
Install Date:	1/1/79 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	2.00	Owner Tank ID:	0002

Operator:	Not reported
Operator Address:	Not reported
Owner:	JOSEPH NICASTRO
Owner Address:	720 HAMILTON BLVD S. PLAINFIELD, NJ 07080
Tank Capacity:	2000.00 Gallons
Tank Contents:	B. UNLEADED GASOLINE
Tank Construction:	H. OTHER:
Tank Structure:	C. OTHER
Pipe Contents:	H. OTHER:
Pipe Structure:	C. OTHER
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

JOE NICASTRO'S GARAGE (Continued) **U000368159**

Facility ID:	0261696	Facility Status:	Inactive
Install Date:	1/1/79 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	4.00	Owner Tank ID:	0004

Operator:	Not reported
Operator Address:	Not reported
Owner:	JOSEPH NICASTRO
Owner Address:	720 HAMILTON BLVD S. PLAINFIELD, NJ 07080
Tank Capacity:	4000.00 Gallons
Tank Contents:	B. UNLEADED GASOLINE
Tank Construction:	H. OTHER:
Tank Structure:	C. OTHER
Pipe Contents:	H. OTHER:
Pipe Structure:	C. OTHER
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

Facility ID:	0261696	Facility Status:	Inactive
Install Date:	1/1/79 0:00:00	Facility Type:	B. COMMERCIAL/INDUSTRIAL
Unique Tank ID:	3.00	Owner Tank ID:	0003

Operator:	Not reported
Operator Address:	Not reported
Owner:	JOSEPH NICASTRO
Owner Address:	720 HAMILTON BLVD S. PLAINFIELD, NJ 07080
Tank Capacity:	4000.00 Gallons
Tank Contents:	B. UNLEADED GASOLINE
Tank Construction:	H. OTHER:
Tank Structure:	C. OTHER
Pipe Contents:	H. OTHER:
Pipe Structure:	C. OTHER
Over Fill Products:	No
Spill Containment Around Fill Pipe:	No
Tank Status:	G. REMOVED
Date Tank Removed:	Not reported
Date Tank Abandoned in Place:	Not reported
Date Tank Taken Out of Service:	Not reported
Date of Tank Sale or Transfer:	Not reported
Tank Closure Number:	Not reported
Tank ISRA Number:	Not reported
Tank in Wellhead Protection Area:	Not reported
Is Facility in Compliance Rules:	0

O77 **BP SERVICE STATION SOUTH PLAINFIELD BORO** **SHWS** **S103031223**
NE **700 HAMILTON BLVD** **N/A**
1/2-1 **SOUTH PLAINFIELD BOROUGH, NJ**
5260
Lower

BP SERVICE STATION SOUTH PLAINFIELD BORO (Continued) **S103031223**

SHWS:

Facility ID: NJL000065995
Case Status: ACTIVE
Contact: BFCM-6
Facility Status: OPEN
CEA/DER: Not reported

Case ID: NJL600188361-001
Status Date: 10/09/1992

Facility ID: NJL000065995
Case Status: PENDING
Contact: BFCM-6
Facility Status: OPEN
CEA/DER: Not reported

Case ID: 930562
Status Date: 05/28/1993

City	EDR ID	Site Name	Site Address	Zip	Database(s)	Facility ID
PISCATAWAY	1000232144	CHEMSOL INC	FLEMING ST LOT 1B	08854	FINDS, RCRIS-LQG, SHWS	NJD980528889
SOUTH PLAINFIEL	1000423219	GETTY PIPE CO SO PLAINFIELD TE	RD 1 TYLER PL	07080	FINDS, RCRIS-LQG	
SOUTH PLAINFIEL	1000423223	GETTY PIPE CO	APGAR DR	07080	FINDS, RCRIS-LQG	
SOUTH PLAINFIEL	1000398012	MEDTECH PLASTICS CO	TYLER RD	07080	FINDS, RCRIS-LQG	
SOUTH PLAINFIELD	S103618340	SOUTH PLAINFIELD TS/ MRF	1503 ASTOR STREET		SWF/LF	1222001174
SOUTH PLAINFIELD	S102214779	DE GUSSA- METZ	SO CLINTON AVE		NJ Spills, NJ Release	5559
SOUTH PLAINFIELD	S102192602	DEGUSSA / METZ	SOUTH CLINTON AVE		NJ Release	5269
SOUTH PLAINFIELD	1001488713	SOUTH CLINTON METALS	2614 S CLINTON AVE	07080	RCRIS-LQG	
SOUTH PLAINFIELD	S102828090	V TUFARO & SON RECYC	225 DURHAM AVE		SWF/LF	1222001410
SOUTH PLAINFIELD	S103033529	154 ELLIOT PLACE	154 ELLIOT PL		SHWS	NJL800217887
SOUTH PLAINFIELD	S100414713	SOUTH PLAINFIELD BORO SLF	KENNETH AVENUE		SWF/LF	1222000544
SOUTH PLAINFIELD	1000411702	KENTILE FLOORS INC S PLAINFIELD PLT	KENTILE RD	07080	FINDS, RCRIS-LQG, MLTS, UST, NJ Spills, NJ Release	0035192
SOUTH PLAINFIELD	1000406365	SOUTH PLAINFIELD ASBESTOS DUMP	NEW MARKET AV	07080	CERC-NFRAP	
SOUTH PLAINFIELD	S101208831	PITT STREET GROUND WATER CONTAMINATION	PITT ST		SHWS, NJ PF	NJL000030700
SOUTH PLAINFIELD	S102877935	FLAGSHIP CLEANING SERVICES	339OA RAND RD	07080	LUST	92-03-10-1248
SOUTH PLAINFIELD	U000368083	FLAGSHIP CLEANING SERVICES INC	3390 A RAND ROAD	07080	UST, SHWS	0260417
SOUTH PLAINFIELD	1001491666	SPRING LAKE PCB CONTAMINATION	SPRING LAKE PARK	07080	CERCLIS	

GEOCHECK VERSION 2.1 ADDENDUM
FEDERAL DATABASE WELL INFORMATION

Well Closest to Target Property (Northern Quadrant)

BASIC WELL DATA

Site ID:	403544074260901	Distance from TP:	>2 Miles
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1965	County:	Middlesex
Altitude:	70.00 ft.	State:	New Jersey
Well Depth:	350.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	40.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	10291965	Prim. Use of Water:	Public supply

LITHOLOGIC DATA

Geologic Age ID (Era/System/Series):	Mesozoic-Triassic-Upper
Principal Lithology of Unit:	Not Reported
Further Description:	Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
FEDERAL DATABASE WELL INFORMATION

Well Closest to Target Property (Eastern Quadrant)

BASIC WELL DATA

Site ID:	403253074234501	Distance from TP:	>2 Miles
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1965	County:	Middlesex
Altitude:	90.00 ft.	State:	New Jersey
Well Depth:	301.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	10.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	06171965	Prim. Use of Water:	Industrial

LITHOLOGIC DATA

Geologic Age ID (Era/System/Series):	Mesozoic-Triassic-Upper
Principal Lithology of Unit:	Not Reported
Further Description:	Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
STATE DATABASE WELL INFORMATION

Water Well Information:

Well Within >2 Miles of Target Property (Northern Quadrant)

Public Water Supply ID:	2004002	Permit Number:	25-13354
Well ID:	2513354	FIPS Code:	23110
X Coordinate:	510184.6875	Y Coordinate:	641805.3125
PWS Name:	Elizabethtown Water Co		
USGS 7.5' Quadrangle:	Plainfield NJ		
Geologic Formation:	Not Reported		
Hydrologic Unit:	Not Reported		
Confinement Status:	Unconfined		

GEOCHECK VERSION 2.1
PUBLIC WATER SUPPLY SYSTEM INFORMATION

Searched by Nearest PWS.

PWS SUMMARY:

PWS ID:	NJ1222303	PWS Status:	Active	Distance from TP:	1 - 2 Miles
Date Initiated:	March / 1982	Date Deactivated:	Not Reported	Dir relative to TP:	North
PWS Name:	HARRIS STEEL-SHOP #7 WEL HARRIS STEEL-SHOP #7 WELL 1640 NEW MARKET AVE SOUTH PLAINFIELD, NJ 07080				
Addressee / Facility:	System Owner/Responsible Party HARRIS STEEL-SHOP #7 WELL RICHARD NELSON 1640 NEW MARKET AVE SOUTH PLAINFIELD, NJ 07080				
Facility Latitude:	40 34 45			Facility Longitude:	074 24 42
City Served:	SOUTHPLAINFIELD				
Treatment Class:	Untreated			Population Served:	Under 101 Persons

PWS currently has or has had major violation(s) or enforcement: Yes

VIOLATIONS INFORMATION:

Violation ID:	9449252	Source ID:	Not Reported	PWS Phone:	Not Reported
Vio. beginning Date:	04/01/94	Vio. end Date:	06/30/94	Vio. Period:	3 Months
Num of required Samples:	Not Reported	Number of Samples Taken:		Not Reported	
Analysis Result:	Not Reported	Maximum Contaminant Level:		Not Reported	
Analysis Method:	Not Reported				
Violation Type:	Monitoring, Routine Major (TCR)				
Contaminant:	COLIFORM (TCR)				
Vio. Awareness Date:	081194				

Violation ID:	9335161	Source ID:	Not Reported	PWS Phone:	Not Reported
Vio. beginning Date:	07/01/93	Vio. end Date:	12/31/93	Vio. Period:	6 Months
Num of required Samples:	Not Reported	Number of Samples Taken:		Not Reported	
Analysis Result:	Not Reported	Maximum Contaminant Level:		Not Reported	
Analysis Method:	Not Reported				
Violation Type:	Initial Tap Sampling for Pb and Cu				
Contaminant:	LEAD & COPPER RULE				
Vio. Awareness Date:	Not Reported				

EPA Waste Codes Addendum

Code	Description
D001	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D018	BENZENE
D022	CHLOROFORM
D027	1,4-DICHLOROBENZENE
D028	1,2-DICHLOROETHANE
D035	METHYL ETHYL KETONE
D039	TETRACHLOROETHYLENE
D040	TRICHLOROETHYLENE
F003	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
F005	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Elapsed ASTM days: Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

FEDERAL ASTM RECORDS:

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System
Source: EPA
Telephone: 703-413-0223
CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 08/26/99
Date Made Active at EDR: 11/11/99
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 08/30/99
Elapsed ASTM days: 73
Date of Last EDR Contact: 08/30/99

ERNS: Emergency Response Notification System
Source: EPA/NTIS
Telephone: 202-260-2342
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 10/28/99
Date Made Active at EDR: 12/03/99
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 11/01/99
Elapsed ASTM days: 32
Date of Last EDR Contact: 11/01/99

NPL: National Priority List
Source: EPA
Telephone: N/A
National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC).

Date of Government Version: 07/22/99
Date Made Active at EDR: 09/10/99
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 08/05/99
Elapsed ASTM days: 36
Date of Last EDR Contact: 08/05/99

RCRIS: Resource Conservation and Recovery Information System
Source: EPA/NTIS
Telephone: 800-424-9346
Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Date of Government Version: 09/01/99
Date Made Active at EDR: 11/17/99
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 10/06/99
Elapsed ASTM days: 42
Date of Last EDR Contact: 10/04/99

CORRACTS: Corrective Action Report
Source: EPA
Telephone: 800-424-9346
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/01/99
Date Made Active at EDR: 04/16/99
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 03/17/99
Elapsed ASTM days: 30
Date of Last EDR Contact: 09/13/99

FEDERAL NON-ASTM RECORDS:

BRS: Biennial Reporting System
Source: EPA/NTIS
Telephone: 800-424-9346
The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/95
Database Release Frequency: Biennially
Date of Last EDR Contact: 09/23/99
Date of Next Scheduled EDR Contact: 12/20/99

CONSENT: Superfund (CERCLA) Consent Decrees
Source: EPA Regional Offices
Telephone: Varies
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: Varies
Database Release Frequency: Varies
Date of Last EDR Contact: Varies
Date of Next Scheduled EDR Contact: N/A

FINDS: Facility Index System/Facility Identification Initiative Program Summary Report
Source: EPA
Telephone: N/A
Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/01/99
Database Release Frequency: Quarterly
Date of Last EDR Contact: 10/13/99
Date of Next Scheduled EDR Contact: 01/10/00

HMIRS: Hazardous Materials Information Reporting System
Source: U.S. Department of Transportation
Telephone: 202-366-4526
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/98
Database Release Frequency: Annually
Date of Last EDR Contact: 10/28/99
Date of Next Scheduled EDR Contact: 01/24/00

MLTS: Material Licensing Tracking System
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 12/08/98
Database Release Frequency: Quarterly
Date of Last EDR Contact: 10/12/99
Date of Next Scheduled EDR Contact: 01/10/00

NPL LIENS: Federal Superfund Liens
Source: EPA
Telephone: 205-564-4267
Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/91
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 08/27/99
Date of Next Scheduled EDR Contact: 01/22/00

PADS: PCB Activity Database System
Source: EPA
Telephone: 202-260-3936
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 09/22/97
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 08/17/99
Date of Next Scheduled EDR Contact: 02/14/00

RAATS: RCRA Administrative Action Tracking System
Source: EPA
Telephone: 202-564-4104
RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/95
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 09/13/99
Date of Next Scheduled EDR Contact: 12/13/99

ROD: Records Of Decision
Source: NTIS
Telephone: 703-416-0223
Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/31/99
Database Release Frequency: Annually
Date of Last EDR Contact: 10/06/99
Date of Next Scheduled EDR Contact: 11/22/99

TRIS: Toxic Chemical Release Inventory System
Source: EPA
Telephone: 202-260-1531
Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/97
Database Release Frequency: Annually
Date of Last EDR Contact: 09/27/99
Date of Next Scheduled EDR Contact: 12/27/99

TSCA: Toxic Substances Control Act
Source: EPA
Telephone: 202-260-1444
Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/94
Database Release Frequency: Every 4 Years
Date of Last EDR Contact: 09/20/99
Date of Next Scheduled EDR Contact: 01/24/00

MINES: Mines Master Index File
Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959

Date of Government Version: 08/01/98
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 10/04/99
Date of Next Scheduled EDR Contact: 01/03/00

STATE OF NEW JERSEY ASTM RECORDS:

LUST: Regulated UST Contamination Sites Listing
Source: New Jersey Department of Environmental Protection
Telephone: 609-292-8761
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 09/29/99
Date Made Active at EDR: 10/22/99
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 09/30/99
Elapsed ASTM days: 22
Date of Last EDR Contact: 09/30/99

SHWS: Known Contaminated Sites in New Jersey Except Those Associated with Bureau of Underground Storage Sites (BUST)
Source: New Jersey Department of Environmental Protection
Telephone: 609-292-8761
The Known Contaminated Sites in New Jersey includes sites under the purview of the Site Remediation Program which have contamination present at levels greater than the applicable cleanup criteria for soil and/or groundwater standards. The sites appearing in Known Contaminated Sites in New Jersey are classified as either active, where the site is assigned to a specific remedial program area, or pending, where the site is awaiting assignment to a specific remedial program area. Sites where no further action (NFA) designation has been given are not included in this report unless there are other areas of identified contamination which have not been remediated. This report includes sites being remediated under all of the various regulatory programs administered by the Site Remediation Program such as: Federal Superfund Program, Federal Resource Conservation and Recovery Act (RCRA), New Jersey's Industrial Site Recovery Act (ISRA), New Jersey's Underground Storage of Hazardous Substances Act, New Jersey's Spill Compensation and Control Act, New Jersey's Solid Waste Management Act, New Jersey's Water Pollution Control Act.

Date of Government Version: 09/01/97
Date Made Active at EDR: 04/17/98
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 03/19/98
Elapsed ASTM days: 29
Date of Last EDR Contact: 08/13/99

LF: Solid Waste Facility Directory
Source: Department of Environmental Protection
Telephone: 609-984-6741
Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 08/23/99
Date Made Active at EDR: 10/22/99
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 09/23/99
Elapsed ASTM days: 29
Date of Last EDR Contact: 09/07/99

UST: Underground Storage Tank Data
Source: Department of Environmental Protection
Telephone: 609-633-1455
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 09/15/99
Date Made Active at EDR: 10/18/99
Database Release Frequency: Annually
Date of Data Arrival at EDR: 09/15/99
Elapsed ASTM days: 33
Date of Last EDR Contact: 09/13/99

STATE OF NEW JERSEY NON-ASTM RECORDS:

CHROME: NJ CHROME
Source: Department of Environmental Protection
Telephone: 609-984-4071
Known chromate chemical production waste sites.

Date of Government Version: 06/23/99
Database Release Frequency: Annually
Date of Last EDR Contact: 09/13/99
Date of Next Scheduled EDR Contact: 12/13/99

MAJOR: List of Major Facilities
Source: Department of Environmental Protection
Telephone: 609-292-1690
Major facilities means all facilities, located on one or more contiguous or adjacent properties owned or operated by the same person, having total combined storage capacity of 20,000 gallons or more for hazardous substances other than petroleum or petroleum products, or 200,000 gallons or more of hazardous substances of all kinds.

Date of Government Version: 02/01/99
Database Release Frequency: Biennially
Date of Last EDR Contact: 11/22/99
Date of Next Scheduled EDR Contact: 02/21/00

PF: Publicly Funded Cleanups Site Status Report
Source: Department of Environmental Protection
Telephone: 609-292-9418
The report focuses on publicly funded cleanups and features progress achieved and underway at all sites that are being addressed by the NJDEP with public funds.

Date of Government Version: 06/30/97
Database Release Frequency: Annually
Date of Last EDR Contact: 08/30/99
Date of Next Scheduled EDR Contact: 11/29/99

RELEASE: Hazardous Material Incident Database
Source: Department of Environmental Protection
Telephone: 604-633-0898
Hazardous material release. Initial notification information reported to the Department of Environmental Protection's Environmental Action Line and the office has not conducted any investigations to determine its validity or accuracy.

Date of Government Version: 06/30/99
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 10/12/99
Date of Next Scheduled EDR Contact: 01/10/00

SPILLS: Spills
Source: Department of Environmental Protection
Telephone: 609-633-0898
Initial notification information of hazardous material incidents, where there is land contamination, reported to the Department of Environmental Protection's Environmental Action Line. The DEP has not conducted any investigation to determine its validity or accuracy.

Date of Government Version: 06/30/99
Database Release Frequency: Annually
Date of Last EDR Contact: 10/12/99
Date of Next Scheduled EDR Contact: 01/10/00

Historical and Other Database(s)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Former Manufactured Gas (Coal Gas) Sites: The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. ©Copyright 1993 Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

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DELISTED NPL: NPL Deletions
Source: EPA
Telephone: N/A
The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 06/24/99
Date Made Active at EDR: 09/10/99
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 08/10/99
Elapsed ASTM days: 31
Date of Last EDR Contact: 08/10/99

NFRAP: No Further Remedial Action Planned
Source: EPA
Telephone: 703-413-0223
As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

Date of Government Version: 08/26/99
Date Made Active at EDR: 11/11/99
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 08/30/99
Elapsed ASTM days: 73
Date of Last EDR Contact: 08/30/99

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-260-2805
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-260-2805
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SWDIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

Area Radon Information: The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones: Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

Oil/Gas Pipelines/Electrical Transmission Lines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines and electrical transmission lines.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

USGS Water Wells: In November 1971 the United States Geological Survey (USGS) implemented a national water resource information tracking system. This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on more than 900,000 wells, springs, and other sources of groundwater.

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in March 1997 from the U.S. Fish and Wildlife Service.

New Jersey State Wetlands
Source: New Jersey Department of Environmental Protection
This data was obtained by EDR in 1998 from the New Jersey Department of Environmental Protection.

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Water Dams: National Inventory of Dams
Source: Federal Emergency Management Agency
Telephone: 202-646-2801
National computer database of more than 74,000 dams maintained by the Federal Emergency Management Agency.

New Jersey Public-Community Water-Supply Wells
Source: New Jersey Department of Environmental Protection
Telephone: 609-292-5550

New Jersey Radon Tier Assignment Report
Source: Department of Environmental Protection
The DEP's tier system classifies municipalities as having high, moderate or low potential for indoor radon problems based on the percentage of homes with radon concentrations greater than or equal to 4 picocuries/liter (pCi/l).

REFERENCE 21

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM **PROJECT NOTE**

TO: Metz Metallurgical Corp. Site File

DATE: 8/3/99

FROM: Kiersten Dorneman

SUBJECT: Sensitive Environments

REFERENCE

Letter from Thomas F. Breden, Supervisor, Natural Heritage Program, Office of Natural Lands Management, Division of Parks and Forestry, NJDEP, to Kiersten Dorneman, Roy F. Weston, Inc., 15 June 1999; with attachments. Four-Mile Vicinity Map for Metz Metallurgical Corp., compiled from the following U.S. Department of the Interior, Geological Survey Topographic Maps, 7.5 minute series, Quadrangles for Plainfield, NJ, 1955, photorevised 1981; Bound Brook, NJ, 1955, photorevised 1970, photoinspected 1977; and Perth Amboy, NJ, 1956, photorevised 1981. Fifteen-Mile Surface Water Pathway Map for Metz Metallurgical Corp. Site, South Plainfield, Middlesex County, NJ, compiled from U.S. Department of the Interior, Geological Survey Maps, 7.5-minute series, Quadrangles for Plainfield, NJ, 1955, photorevised 1981; Bound Brook, NJ, 1955, photorevised 1970, photoinspected 1977; and Perth Amboy, NJ, 1956, photorevised 1981.

On 3 August 1999, START member Dorneman determined the sensitive environments located within a 4-mile radius and a 15-mile downstream target distance limit (TDL) of the site from the Natural Heritage information provided by the NJDEP. The exact location of the species was not provided; therefore, it is only known that the sensitive environments are located within a 4-mile radius and a 15-mile downstream TDL.

Sensitive environments located within a 4-mile radius:

Sensitive Environment	Status
Upland Sandpiper	state endangered
Northern Harrier	state endangered
Wood Turtle	state threatened
Bobolink	state threatened
Migrant Loggerhead Shrike	state endangered
Large-water Plantain	state endangered
Pale Duckweed	state endangered

Sensitive environment located within the 15-mile TDL:

Sensitive Environment	Status
Migrant Loggerhead Shrike	state endangered

State of New Jersey
Department of Environmental Protection

Christine Todd Whitman
Governor

Robert C. Shinn, Jr.
Commissioner

Division of Parks and Forestry
Office of Natural Lands Management
Natural Heritage Program
P.O. Box 404
Trenton, NJ 08625-0404
Tel. #609-984-1339
Fax. #609-984-1427

June 15, 1999

Kiersten Dorneman
Roy F. Weston, Inc.
1090 King Georges Post Road, Suite 201
Edison, NJ 08837-3703

Re: Metz Metallurgical and Associated Waterways

Dear Ms. Dorneman:

Thank you for your data request regarding rare species information for the above referenced project site in Middlesex and Somerset Counties.

The Natural Heritage Data Base does not have any records for rare plants, animals, or natural communities on the Metz Metallurgical site. However, there are records for occurrences of migrant loggerhead shrike and *Ranunculus pusillus* that may be on or in the immediate vicinity of the waterways that you have associated with this site. The attached list provides additional information about these occurrences. Also attached is a list of rare species from records in the general vicinity of the project site (within approximately 4 miles).

Also attached are lists of rare species and natural communities that have been documented from Middlesex and Somerset Counties. These county lists can be used as a master species list for directing further inventory work. If suitable habitat is present at the project site, these species have potential to be present. If you have questions concerning the wildlife records or wildlife species mentioned in this response, we recommend you contact the Division of Fish, Game and Wildlife, Endangered and Nongame Species Program.

In order to red flag the general locations of documented occurrences of rare and endangered species and natural communities, we have prepared computer generated Natural Heritage Index Maps. Enclosed please find these maps for the Plainfield and Bound Brook USGS quadrangles.

PLEASE SEE THE ATTACHED 'CAUTIONS AND RESTRICTIONS ON NHP DATA'.

Thank you for consulting the Natural Heritage Program. The attached invoice details the payment

CAUTIONS AND RESTRICTIONS ON NATURAL HERITAGE DATA

The quantity and quality of data collected by the Natural Heritage Program is dependent on the research and observations of many individuals and organizations. Not all of this information is the result of comprehensive or site-specific field surveys. Some natural areas in New Jersey have never been thoroughly surveyed. As a result, new locations for plant and animal species are continuously added to the data base. Since data acquisition is a dynamic, ongoing process, the Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of New Jersey. Information supplied by the Natural Heritage Program summarizes existing data known to the program at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. The attached data is provided as one source of information to assist others in the preservation of natural diversity.

This office cannot provide a letter of interpretation or a statement addressing the classification of wetlands as defined by the Freshwater Wetlands Act. Requests for such determination should be sent to the DEP Land Use Regulation Program, CN 401, Trenton, NJ 08625-0401.

This cautions and restrictions notice must be included whenever information provided by the Natural Heritage Database is published.

11 JUN 1999

GENERAL VICINITY OF PROJECT SITE
RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN
THE NEW JERSEY NATURAL HERITAGE DATABASE

NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK	DATE OBSERVED	IDENT.
*** Vertebrates								
BARTRAMIA LONGICAUDA	UPLAND SANDPIPER		E		G5	S1B	1955-??-??	Y
CIRCUS CYANEUS	NORTHERN HARRIER		E/U		G5	S1B,S3N	1988-08-23	
CLEMMYS INSCULPTA	WOOD TURTLE		T		G4	S3	1995-03-27	Y
DOLICHONYX ORYZIVORUS	BOBOLINK		T/T		G5	S2B	1993-06-02	Y
LANIUS LUDOVICIANUS MIGRANS	MIGRANT LOGGERHEAD SHRIKE		E		G5T3Q	S1B,S1N	1991-08-21	Y
*** Vascular plants								
ALISMA TRIVIALE	LARGE WATER-PLANTAIN		E		G5T5	S1	1932-08-05	Y
CAREX PALLESCENS	PALE SEDGE				G5	S2	1879-05-??	Y
LEMNA VALDIVIANA	PALE DUCKWEED		E		G5	S1	1878-12-??	Y
RANUNCULUS PUSILLUS	LOW SPEARWORT				G5	S2	1982-06-04	Y

9 Records Processed

11 JUN 1999

ON OR IN THE IMMEDIATE VICINITY OF ASSOCIATED WATERWAYS
RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN
THE NEW JERSEY NATURAL HERITAGE DATABASE

NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK	DATE OBSERVED	IDENT.
*** Vertebrates								
LANIUS LUDOVICIANUS MIGRANS	MIGRANT LOGGERHEAD SHRIKE		E		G5T3Q	S1B,S1N	1991-08-21	Y
*** Vascular plants								
RANUNCULUS PUSILLUS	LOW SPEARWORT				G5	S2	1982-06-04	Y

2 Records Processed

NATURAL HERITAGE INDEX MAPS

The Natural Heritage Database contains several thousand records of individual occurrences of endangered and threatened species and ecosystems. Many of these occurrences either have not been documented in recent years or have not had habitat boundaries delineated. Because much work remains to be done to delineate habitat boundaries and determine current status for these occurrences, Natural Heritage Index Maps were devised to red flag general areas in which the occurrences are located. The index maps are meant to be used as a tool to point to areas which may be of significance for endangered biological diversity. These maps do not depict all endangered species habitat in the state, but merely general areas which contain documented occurrences. Many additional areas may contain unidentified or poorly documented occurrences.

The maps have been produced using a computer generated grid which shades a grid cell approximately 330 acres in size if an endangered or threatened species or ecosystem has been documented anywhere within the cell. To use these maps, we suggest that you first find the location to be checked on the quad maps and then refer to the same grid location of the Natural Heritage Index Maps. The Natural Heritage Program can be contacted for additional information as specific projects are planned.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

UNITED STATES
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

BOUND BROOK QUADRANGLE
NEW JERSEY
7.5 MINUTE SERIES (TOPOGRAPHIC)

SCALE 1:24 000

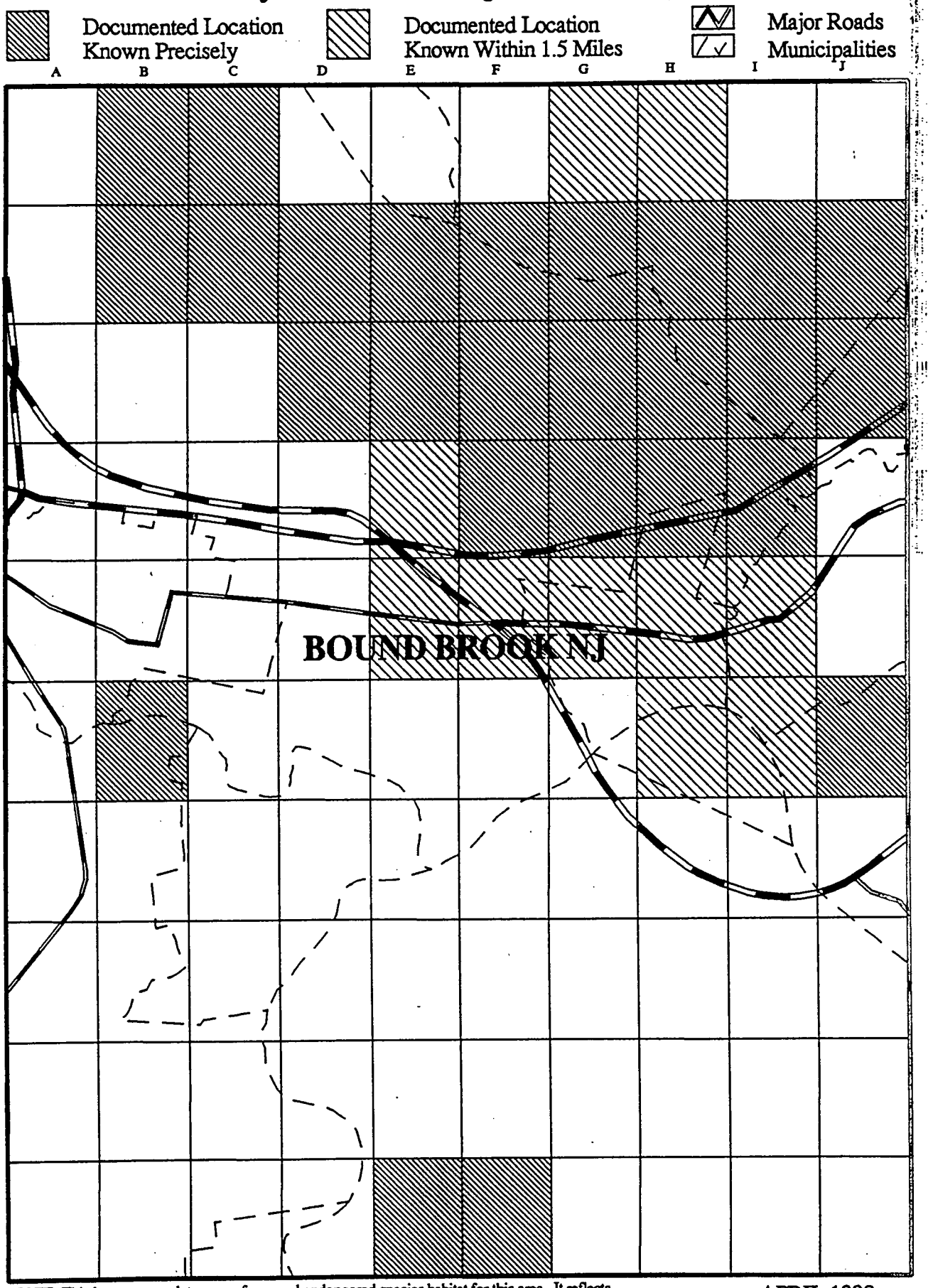
CONTOUR INTERVAL 20 FEET

ROAD CLASSIFICATION

BOUND BROOK, N. J.

Generalized Natural Heritage Index Map

Generalized Locations for Rare and Endangered Elements of Natural Diversity



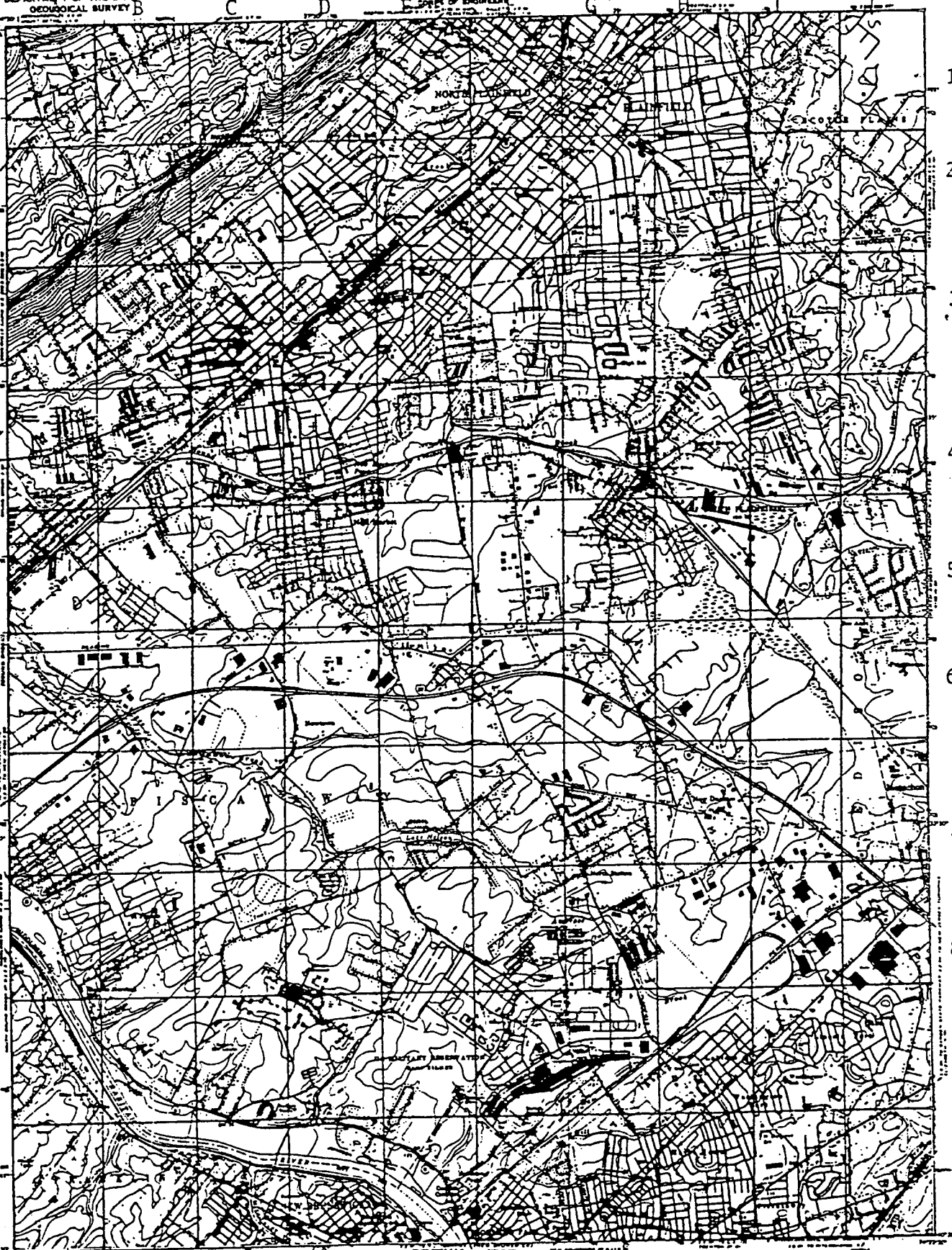
NOTE: This is not a complete map of rare and endangered species habitat for this area. It reflects data on known occurrences compiled as of the above date. It includes both historically and recently documented habitat. Additional occurrences may be found on unsurveyed habitat. For more information, contact the Office of Natural Lands Management, CN404, Trenton, NJ 08625.

APRIL 1998
Updated semiannually

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

UNITED STATES
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

PLAINFIELD QUADRANGLE
NEW JERSEY
7.5 MINUTE SERIES (TOPOGRAPHIC)



Published by the Army Map Service
Edited and published by the Geological Survey

SCALE 1:24 000

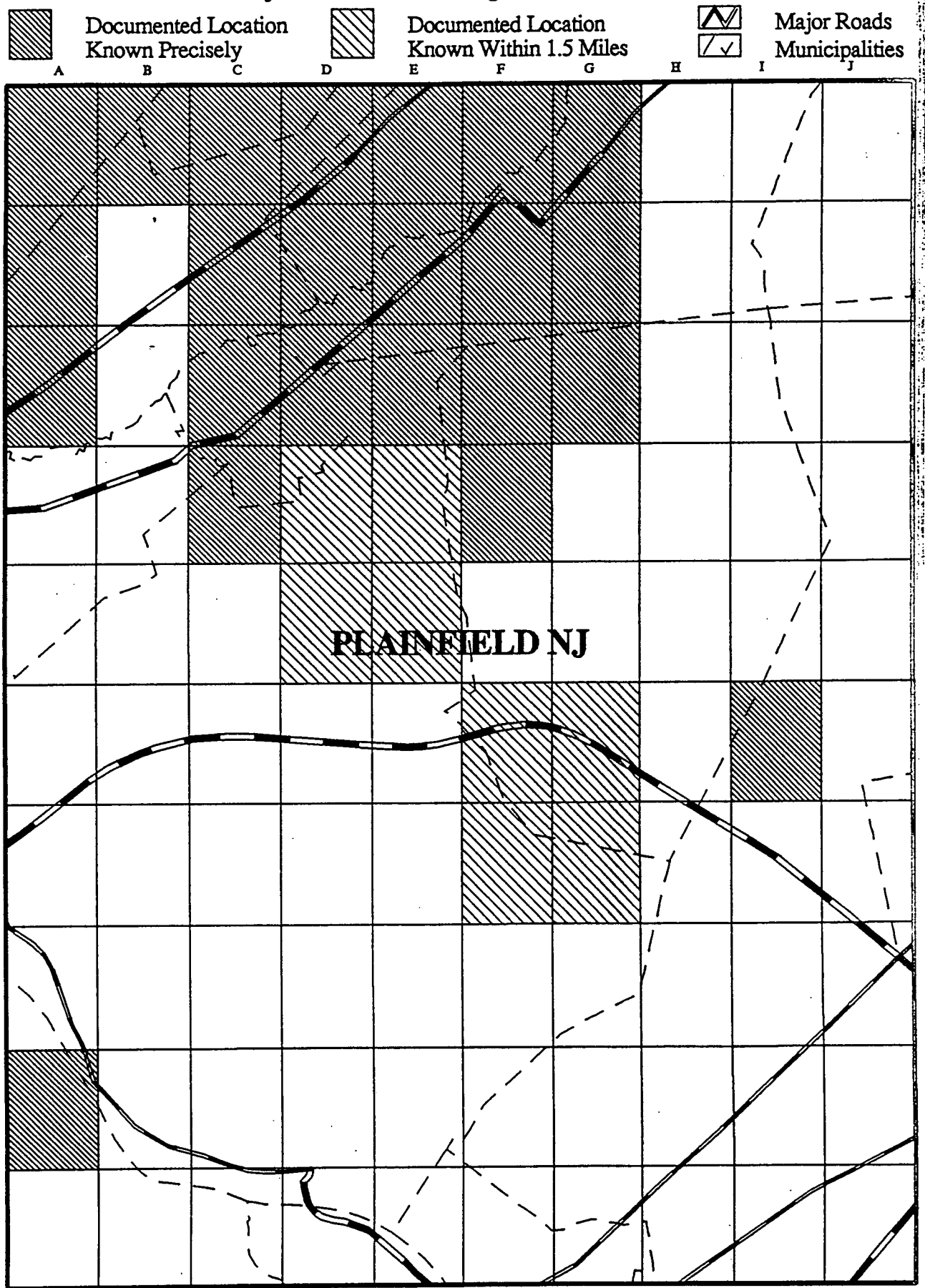
CONTOUR INTERVAL 20 FEET

ROAD CLASSIFICATION

PLAINFIELD, N. J.

Generalized Natural Heritage Index Map

Generalized Locations for Rare and Endangered Elements of Natural Diversity



NOTE: This is not a complete map of rare and endangered species habitat for this area. It reflects data on known occurrences compiled as of the above date. It includes both historically and recently documented habitat. Additional occurrences may be found on unsurveyed habitat. For more information, contact the Office of Natural Lands Management, CN404, Trenton, NJ 08625.

APRIL 1998
Updated semiannually

01 APR 1999

MIDDLESEX COUNTY

RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN

THE NEW JERSEY NATURAL HERITAGE DATABASE

NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK
*** Vertebrates						
AMMODRAMUS HENSLOWII	HENSLOW'S SPARROW		E		G4	S1B
AMMODRAMUS SAVANNARUM	GRASSHOPPER SPARROW	(PS)	T/T		G5	S2B
ASIO OTUS	LONG-EARED OWL		T/T		G5	S2B,S2N
BARTRAMIA LONGICAUDA	UPLAND SANDPIPER		E		G5	S1B
CIRCUS CYANEUS	NORTHERN HARRIER		E/U		G5	S1B,S3N
CLEMMYS INSCULPTA	WOOD TURTLE		T		G4	S3
CLEMMYS MUHLENBERGII	BOG TURTLE	(LT-T(S/A))	E		G3	S2
DOLICHONYX ORYZIVORUS	BOBOLINK		T/T		G5	S2B
FALCO PEREGRINUS	PEREGRINE FALCON	E(S/A)	E		G4	S1B,S?N
HYLA ANDERSONII	PINE BARRENS TREEFROG		E		G4	S3
LANIUS LUDOVICIANUS MIGRANS	MIGRANT LOGGERHEAD SHRIKE		E		G5T3Q	S1B,S1N
NYCTANASSA VIOLACEA	YELLOW-CROWNED NIGHT-HERON		T/T		G5	S2B
PASSERCULUS SANDWICHENSIS	SAVANNAH SPARROW		T/T		G5	S2B,S4N
PODILYMBUS PODICEPS	PIED-BILLED GREBE		E/S		G5	S1B,S3N
*** Invertebrates						
AESHNA CLEPSYDRA	MOTTLED DARNER				G4	S2S3
ALASMIDONTA UNDULATA	TRIANGLE FLOATER				G4	S3
ANAX LONGIPES	COMET DARNER				G5	S2S3
BOLORIA SELENE MYRINA	A SILVER-BORDERED FRITILLARY				G5T5	S2
CELITHEMIS MARTHA	MARTHA'S PENNANT				G4	S3
ENALLAGMA BASIDENS	DOUBLE-STRIPED BLUET				G5	S3
ENALLAGMA PICTUM	SCARLET BLUET				G3	S3
ERYNNIS PERSIUS PERSIUS	A PERSIUS DUSKY WING				G4T2T3	SH
INCISALIA IRUS	FROSTED ELFIN				G3G4	S2S3
LASMIGONA SUBVIRIDIS	GREEN FLOATER				G3	SH
LESTES EURINUS	AMBER-WINGED SPREADWING				G4	S2
METARRANTHIS PILOSARIA	COASTAL SWAMP METARRANTHIS				G3G4	S3S4
PAPAIPEMA NECOPINA	SUNFLOWER BORER MOTH				G4?	SH

MIDDLESEX COUNTY

RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN

THE NEW JERSEY NATURAL HERITAGE DATABASE

NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK
PONTIA PROTODICE	CHECKERED WHITE				G4	S1
SPEYERIA IDALIA	REGAL FRITILLARY				G3	SX
SYMPETRUM AMBIGUUM	BLUE-FACED MEADOWHAWK				G5	S2S3
*** Vascular plants						
AGALINIS AURICULATA	EARED FALSE FOXGLOVE				G3	SX
AGASTACHE NEPETOIDES	YELLOW GIANT HYSSOP				G5	S2
ARTEMISIA CAMPESTRIS SSP CAUDATA	WILD WORMWOOD				G5T5	S2
ASCLEPIAS RUBRA	RED MILKWEED			LP	G4G5	S2
ASCLEPIAS VERTICILLATA	WHORLED MILKWEED				G5	S2
ASTER RADULA	LOW ROUGH ASTER		E		G5	S1
BIDENS BIDENTOIDES	BUR-MARIGOLD		E		G3	S2
BIDENS EATONII	EATON'S BEGGARS-TICK		E		G2	S1.1
CALAMOVILFA BREVIPILIS	PINE BARREN REEDGRASS			LP	G4	S4
CAREX BARRATTII	BARRATT'S SEDGE			LP	G3G4	S4
CAREX LOUISIANICA	LOUISIANA SEDGE		E		G5	S1.1
CAREX POLYMORPHA	VARIABLE SEDGE		E		G2G3	S1
CAREX ROSTRATA	BEAKED SEDGE				G5	S2
CAREX WILLDENOWII	WILLDENOW'S SEDGE				G5	S2
CRATAEGUS CALPODENDRON	PEAR HAWTHORN		E		G5	S1
CYPERUS LANCASTRIENSIS	LANCASTER FLATSEDGE				G5	S1
DRABA REPTANS	CAROLINA WHITLOW-GRASS		E		G5	SH
ELATINE AMERICANA	AMERICAN WATERWORT				G4	S2
EUPATORIUM ALTISSIMUM	TALL THOROUGHWORT				G5	S2
GENTIANA SAPONARIA	SOAPWORT GENTIAN				G5	S3
HELONIAS BULLATA	SWAMP-PINK	LT	E	LP	G3	S3
HOTTONIA INFLATA	FEATHERFOIL		E		G4	S1
HYDROCOTYLE RANUNCULOIDES	FLOATING PENNYWORT		E		G5	S1
ISOETES RIPARIA	RIVER-BANK QUILLWORT				G4	S3

MIDDLESEX COUNTY

RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN

THE NEW JERSEY NATURAL HERITAGE DATABASE

NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK
LATHYRUS OCHROLEUCUS	PALE VETCHLING PEAVINE		E		G4G5	SH
LIATRIS SCARIOSA VAR NOVAE-ANGLIAE	NORTHERN BLAZING STAR		E		G5?T3	SH
LISTERA AUSTRALIS	SOUTHERN TWAYBLADE			LP	G4	S2
LYSIMACHIA HYBRIDA	LANCE-LEAVED LOOSESTRIFE				G5	S3
MELANTHIUM VIRGINICUM	VIRGINIA BUNCHFLOWER		E		G5	S1
MICRANTHEMUM MICRANTHEMOIDES	NUTTALL'S MUDWORT		E		GH	SH
MIMULUS ALATUS	WINGED MONKEY FLOWER				G5	S3
MYRIOPHYLLUM TENELLUM	SLENDER WATER-MILFOIL		E		G5	S1
MYRIOPHYLLUM VERTICILLATUM	WHORLED WATER-MILFOIL		E		G5	SH
PHORADENDRON SEROTINUM	MISTLETOE			LP	G5	S2
PLANTAGO MARITIMA	SEA-SIDE PLANTAIN				G5	S2
PLATANTHERA FLAVA VAR FLAVA	SOUTHERN REIN ORCHID		E		G4T4?Q	S1
PLATANTHERA PERAMOENA	PURPLE FRINGELESS ORCHID		E		G5	S1
POLYGALA POLYGAMA	RACEMED MILKWORT				G5	S2
POLYGONUM GLAUCUM	SEA-BEACH KNOTWEED		E		G3	S1
POTAMOGETON VASEYI	VASEY'S PONDWEED				G4	SH.1
PUCCINELLIA FASCICULATA	TORREY'S MEADOW GRASS				GU	S2
PYCNANTHEMUM TORREI	TORREY'S MOUNTAIN MINT		E		G2	S1
RANUNCULUS PUSILLUS	LOW SPEARWORT				G5	S2
RHODODENDRON CANADENSE	RHODORA		E		G5	S1
SAGITTARIA AUSTRALIS	SOUTHERN ARROW HEAD		E		G5	S1
SAGITTARIA SPATHULATA	TIDAL ARROWHEAD				G4	S3
SCIRPUS MARITIMUS	SALT MARSH BULRUSH		E		G5	SH
SCUTELLARIA LEONARDII	SMALL SKULLCAP		E		G4T4	S1
SOLIDAGO ELLIOTTII	ELLIOTT'S GOLDENROD				G5	S3
SOLIDAGO RIGIDA	STIFF GOLDENROD		E		G5	S1
STACHYS HYSSOPIFOLIA	HYSSOP HEDGE-NETTLE				G5	S2
TRIGLOCHIN MARITIMUM	SEA-SIDE ARROW-GRASS		E		G5	S1
UTRICULARIA GIBBA	HUMPED BLADDERWORT			LP	G5	S3

01 APR 1999

MIDDLESEX COUNTY

RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN

THE NEW JERSEY NATURAL HERITAGE DATABASE

NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK
UTRICULARIA PURPUREA	PURPLE BLADDERWORT			LP	G5	S3
VERBENA SIMPLEX	NARROW-LEAVED VERVAIN		E		G5	S1
VICIA AMERICANA	AMERICAN PURPLE VETCH				G5	S2
VIOLA BRITTONIANA	COAST VIOLET				G4G5	S3
ZIGADENUS LEIMANTHOIDES	OCEANORUS		E		G4Q	S1

88 Records Processed

APR 1999

SOMERSET COUNTY

RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN

THE NEW JERSEY NATURAL HERITAGE DATABASE

NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK
* Vertebrates						
ACCIPITER COOPERII	COOPER'S HAWK		E		G5	S3B,S4N
AMBYSTOMA LATERALE	BLUE-SPOTTED SALAMANDER		E		G5	S1
AMMODRAMUS HENSLOWII	HENSLOW'S SPARROW		E		G4	S1B
AMMODRAMUS SAVANNARUM	GRASSHOPPER SPARROW	(PS)	T/T		G5	S2B
ARDEA HERODIAS	GREAT BLUE HERON		T/S		G5	S2B,S4N
BARTRAMIA LONGICAUDA	UPLAND SANDPIPER		E		G5	S1B
BUTEO LINEATUS	RED-SHOULDERED HAWK		E/T		G5	S1B,S2N
CLEMMYS INSCULPTA	WOOD TURTLE		T		G4	S3
CLEMMYS MUHLENBERGII	BOG TURTLE	(LT-T(S/A))	E		G3	S2
DOLICHONYX ORYZIVORUS	BOBOLINK		T/T		G5	S2B
EURYCEA LONGICAUDA LONGICAUDA	LONGTAIL SALAMANDER		T		G5T5	S2
LYNX RUFUS	BOBCAT		E		G5	S3
MELANERPES ERYTHROCEPHALUS	RED-HEADED WOODPECKER		T/T		G5	S2B,S2N
PASSERCULUS SANDWICHENSIS	SAVANNAH SPARROW		T/T		G5	S2B,S4N
PETROCHELIDON PYRRHONOTA	CLIFF SWALLOW		T/S		G5	S2B
POOECETES GRAMINEUS	VESPER SPARROW		E		G5	S1B,S2N
STRIX VARIA	BARRED OWL		T/T		G5	S3B
* Ecosystems						
CAVE AQUATIC COMMUNITY	CAVE AQUATIC COMMUNITY				G4?	S2
CAVE TERRESTRIAL COMMUNITY	CAVE TERRESTRIAL COMMUNITY				G4?	S3
FLOODPLAIN FOREST	FLOODPLAIN FOREST				G4	S3?
TRAPROCK GLADE/ROCK OUTCROP COMMUNITY	TRAPROCK GLADE/ROCK OUTCROP COMMUNITY				G2	S1?
* Invertebrates						
ALASMIDONTA UNDULATA	TRIANGLE FLOATER				G4	S3
ALASMIDONTA VARICOSA	BROOK FLOATER				G3	S1
GOMPHUS ABBREVIATUS	SPINE-CROWNED CLUBTAIL				G3G4	S2S3

SOMERSET COUNTY
RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN
THE NEW JERSEY NATURAL HERITAGE DATABASE

NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK
HESPERIA LEONARDUS	LEONARD'S SKIPPER	(PS)			G4	S2S3
LAMPSILIS CARIOSA	YELLOW LAMPMUSSEL				G3G4	S1
METARRANTHIS PILOSARIA	COASTAL SWAMP METARRANTHIS				G3G4	S3S4
*** Other types						
PRIMEVAL FOREST	PRIMEVAL FOREST				G3?	S1
*** Vascular plants						
ACER NIGRUM	BLACK MAPLE				G5Q	S2
AGASTACHE NEPETOIDES	YELLOW GIANT HYSSOP				G5	S2
ALISMA TRIVIALE	LARGE WATER-PLANTAIN		E		G5T5	S1
ASCLEPIAS RUBRA	RED MILKWEED			LP	G4G5	S2
ASTER INFIRMUS	CORNEL-LEAVED ASTER				G5	S2
ASTER PRAEALTUS	WILLOW-LEAVED ASTER		E		G5	S1
BOTRYCHIUM ONEIDENSE	BLUNT-LOBED GRAPE-FERN				G4	S2
BOUTELOUA CURTIPENDULA	SIDE-OATS GRAMMA GRASS		E		G5	S1
CALYSTEGIA SPITHAMAEA	ERECT BINDWEED		E		G4G5	S1
CARDAMINE ANGUSTATA	SLENDER TOOTHWORT				G5	S3
CAREX CRAWFORDII	CRAWFORD'S SEDGE				G5	S2
CAREX FRANKII	FRANK'S SEDGE				G5	S3
CAREX PALLESCENS	PALE SEDGE				G5	S2
CAREX WILLDENOWII	WILLDENOW'S SEDGE				G5	S2
CASTILLEJA COCCINEA	SCARLET INDIAN PAINTBRUSH				G5	S2
CERCIS CANADENSIS	REDBUD		E		G5	S1
CHEILANTHES LANOSA	HAIRY LIPFERN				G5	S2
CLEMATIS OCCIDENTALIS	PURPLE CLEMATIS				G5	S2
CRATAEGUS PUNCTATA	DOTTED HAWTHORN				G5	S2
CYNOGLOSSUM VIRGINIANUM VAR VIRGINIANUM	WILD COMFREY				G5T5	S2

1 APR 1999

SOMERSET COUNTY

RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN

THE NEW JERSEY NATURAL HERITAGE DATABASE

NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK
ELEOCHARIS TENUIS VAR VERRUCOSA	SPIKERUSH		E		G5T3T5	S1.1
MELANTHIUM VIRGINICUM	VIRGINIA BUNCHFLOWER		E		G5	S1
MUHLENBERGIA CAPILLARIS	LONG-AWNED SMOKE GRASS		E		G5	S1
PHLOX PILOSA	DOWNY PHLOX		E		G5	SH
PLANTAGO PUSILLA	SLENDER PLANTAIN		E		G5	SH
POTAMOGETON ROBBINSII	ROBBIN'S PONDWEED		E		G5	S2
PTELEA TRIFOLIATA	WAFER ASH		E		G5	S1
RANUNCULUS PUSILLUS	LOW SPEARWORT				G5	S2
RUDBECKIA FULGIDA	ORANGE CONEFLOWER		E		G5	S1
SAGITTARIA AUSTRALIS	SOUTHERN ARROW HEAD		E		G5	S1
SANICULA TRIFOLIATA	LARGE-FRUITED SANICLE		E		G4	S1
SCUTELLARIA LEONARDII	SMALL SKULLCAP		E		G4T4	S1
SELAGINELLA RUPESTRIS	LEDGE SPIKE-MOSS				G5	S2
SPIRANTHES LACINIATA	LACE-LIP LADIES'-TRESSES		E		G4G5	S1
SPOROBOLUS NEGLECTUS	PUFF-SHEATHED DROPSEED		E		G5	S1
STACHYS PALUSTRIS VAR HOMOTRICHA	MARSH HEDGE-NETTLE		E		G5T?	SH
TRIOSTEUM ANGUSTIFOLIUM	NARROW-LEAVED TINKER'S-WEED		E		G5	S1

; Records Processed

REFERENCE 22

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM **PROJECT NOTE**

TO: Metz Metallurgical Corp. Site File

DATE: 5/24/99

FROM: Kiersten Dorneman

SUBJECT: Wetland Frontage and Acreage

REFERENCE: USGS Topographic Maps, National Wetlands Inventory (NWI) Topographic Maps

On 24 September 1999, START member Dorneman delineated HRS eligible wetlands associated with the Air and Surface Water Pathways of the Metz Metallurgical Corp. site. Wetlands, as defined in 40 CFR Section 230.3, within the 4-mile radius or within 15-miles downstream of the site were counted. The USGS and NWI maps were used to plot out the 15-mile downstream pathway as well as the 4-mile radius target distance rings. The wetland frontage for each body of water was calculated by measuring the eligible wetland adjacent to the surface water body. The acreage was calculated by adding the number of acres within each target distance ring. The following results were generated:

Wetland Frontage (miles):

- Drainage Ditch - 0.3 mile of wetlands, located 0.1 mile from PPE
- Tributary to Bound Brook - 0.2 mile of wetlands, located 0.4 mile from PPE
- Bound Brook - 10.7 mile of wetlands, located 1.8 miles from PPE
- Greek Brook - 2.4 miles of wetlands, located 6.5 miles from PPE
- Raritan River - 4.6 miles of wetlands, located 9.3 miles from PPE

Distance	Wetlands Acreage
On-site	0
>0-1/4 mile	3.5
>1/4-1/2 mile	2247.5
>½-1 mile	113
>1-2 mile	504
>2-3 mile	616.5
>3-4 mile	488
TOTAL	**1772.5**

REFERENCE 23

TDD No. 02-99-08-0078
CONTRACT No. 68-W5-0019

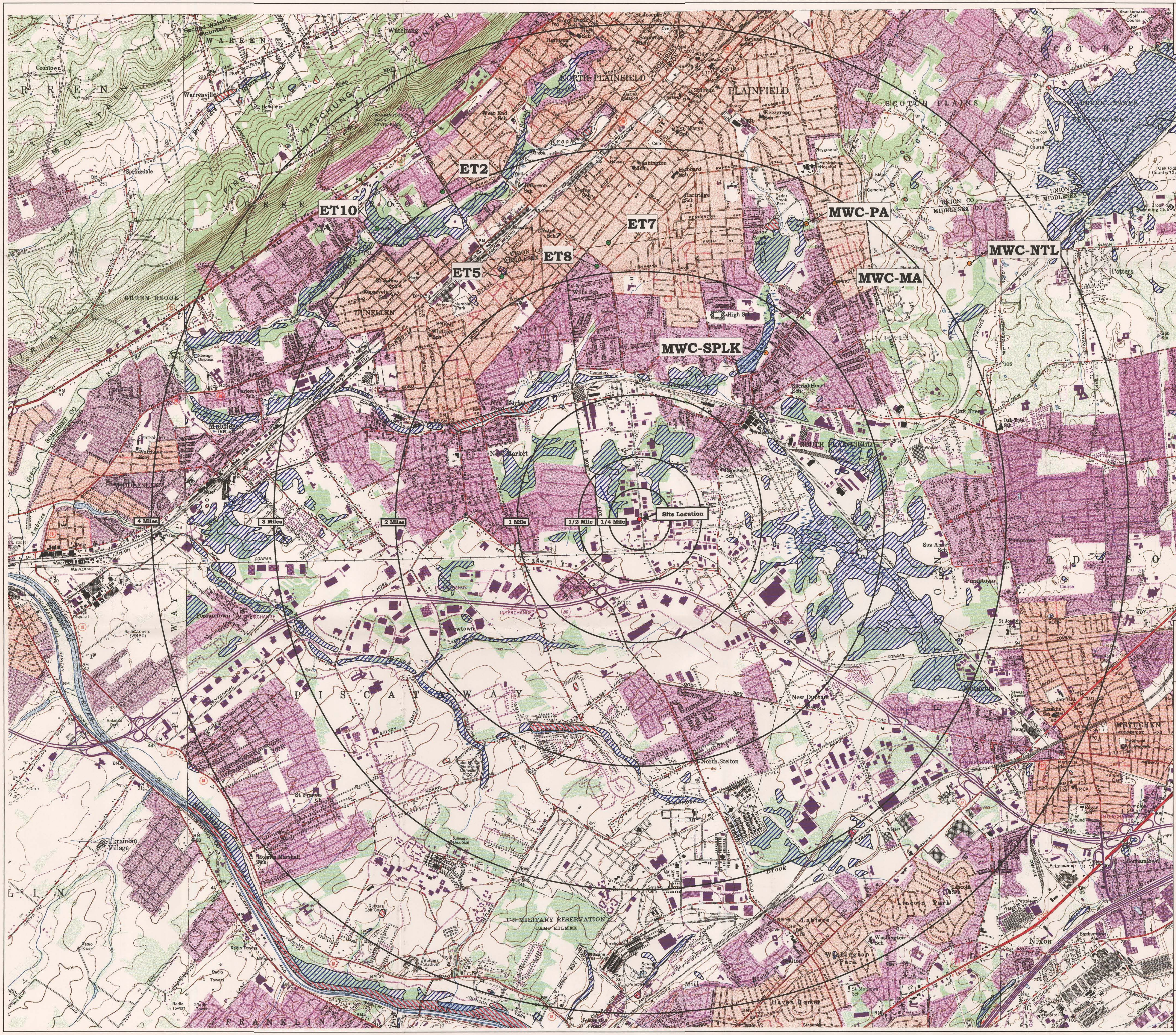


Figure 3
Four Mile Radius Map
Metz Metallurgical Corp. Site
South Plainfield, Middlesex County, NJ

LEGEND

- Site Location
  - -Longitude: -74 25 48.07 West
  - -Latitude: 40 33 55.74 North

Public Supply Wells

- ET - Elizabethtown Water Co.
- MWC - Middlesex Water Co.
- Ineligible Wetlands Under HRS
- HRS Eligible Wetlands

SOURCE: USGS 7.5 Minute Series (Topographic) Quadrangles: Plainfield, NJ, 1955, photorevised 1981; Bound Brook, NJ, 1955, photorevised 1970, photoinspected 1977; Perth Amboy, NJ, 1956, photorevised 1981.

Date: 11/29/99

WESTON MANAGERS DESIGNERS/CONSULTANTS

FEDERAL PROGRAMS DIVISION

REFERENCE 24

TDD No. 02-99-08-0078
CONTRACT No. 68-W5-0019

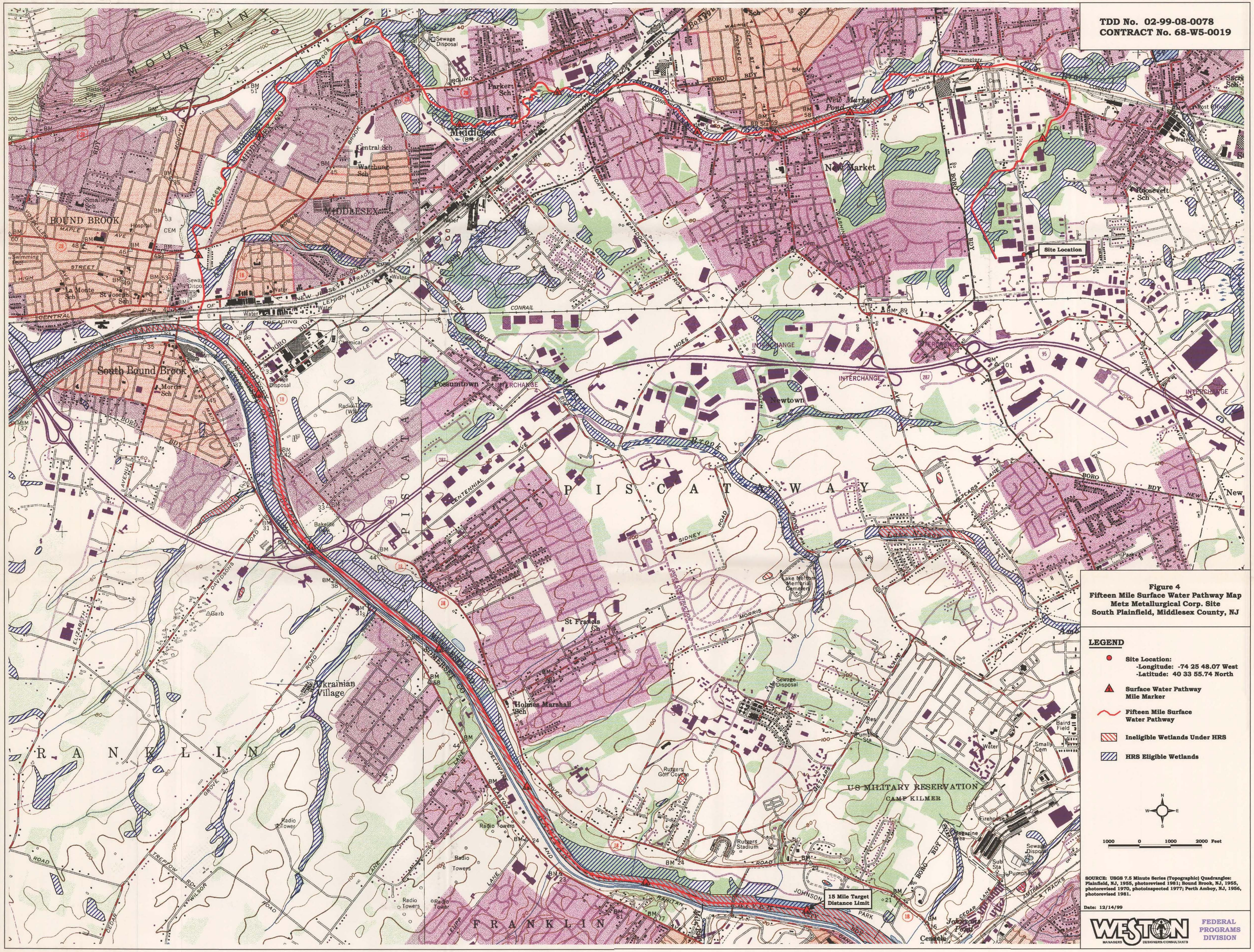


Figure 4
Fifteen Mile Surface Water Pathway Map
Metz Metallurgical Corp. Site
South Plainfield, Middlesex County, NJ

LEGEND

- Site Location:
  - -Longitude: -74 25 48.07 West
  - -Latitude: 40 33 55.74 North
- Surface Water Pathway Mile Marker
- Fifteen Mile Surface Water Pathway
- Ineligible Wetlands Under HRS
- HRS Eligible Wetlands

N W E S

1000 0 1000 2000 Feet

SOURCE: USGS 7.5 Minute Series (Topographic) Quadrangles: Plainfield, NJ, 1955, photorevised 1981; Bound Brook, NJ, 1955, photorevised 1970, photoinspected 1977; Perth Amboy, NJ, 1956, photorevised 1981.

Date: 12/14/99

WESTON MANAGERS DESIGNERS/CONSULTANTS

FEDERAL PROGRAMS DIVISION

REFERENCE 25

FROST ASSOCIATES

88 Founders Village, Clinton, CT 06413
(860) 669-5859 FAX (860) 669-5869

November 27, 1998

To: Roy F. Weston Inc - Region II START
1090 King Georges Post Road, Suite 201
Edison, NJ

Attn: Diane Minsavage

Fr: Frost Associates
Founders Village
Clinton, Conn 06413

Tel: (203) 669-5859
Fax: (860) 669-5859

Sub: S. Plainfield, NJ

CERCLIS:

Job: 4191

Site Longitude: 74-25-48.1 74.430031
Site Latitude : 40-33-55.7 40.565472

The CENTRACTS report below identifies the population, households, and private water wells of each Block Group that lies within, or partially within, the 4, 3, 2, 1, .5, and .25, mile "rings" of the latitude and longitude coordinates above. A CENTRACTS report may have up to six radii of any length and 1500 block groups.

CENTRACTS uses the 1990 Block Group population and Block Group house count data found in the Census Bureau's 1990 STF-1A files. The sources of water supply data are from The Bureau's 1990 STF-3A files. The boundary line coordinates of the Block Groups were extracted from the Census Bureau's 1990 TIGER/Line Files.

CENTRACTS reports are created with programs written by Frost Associates, 88 Founders Village, Clinton Conn 06413. The code was written using Microsoft's Quick-Basic Ver. 4.5.

Latitude and Longitude coordinates identifying a site are entered in degrees and decimal degrees. One or more county files holding Block Group boundary lines are selected for use by CENTRACTS by determining whether the site coordinates fall within the minimum and maximum Lat\Lon coordinates of each county in the state.

Each Block Group line segment has Lat\Lon coordinates representing the "From" and "To" ends of that line. All coordinates from the selected county files are read and converted from degrees, decimal degrees to X\Y miles from the site location. Each line segment is then examined whether it lies within or partially within the maximum ring from the site.

The unique Block Group ID numbers of each line segment that lie within the maximum ring are retained. All Block Group boundary lines matching the Block Group numbers are then extracted from the respective county files to obtain all sides of the included Block Groups. Boundary records are then sorted in adjacent side order to determine the shape and area of each Block Group polygon.

A method to solve for the area of a polygon is to take one-half the sum of the products obtained by multiplying each X-coordinate by the difference between the adjacent Y-coordinates. For a polygon with coordinates at adjacent angles A, B, C, D, and

E. The formula can be expressed:

$$\text{Area} = 1/2\{Xa(Ye-Yb)+ Xb(Ya-Yb)+ Xc(Yb-Yd)+ Xd(Yc-Ye)+ Xe(Yd-Ya)\}$$

For each ring, the selected Block Groups will be inside, outside, or intersected by the ring. When a polygon is intersected, the partial Block Group area within that ring is calculated using the method described below.

When a ring intersects a Block Group, the intersect points are solved and plotted at the points where the ring enters and exits the shape. The chord line, a line within the circle connecting the intersect points is determined. This chord line is used to calculate the segment area, the half moon shape between the chord line and the ring, and the sub-polygon created by the chord line and the Block Group boundaries that lie outside the ring.

The segment area is subtracted from the sub-polygon area to determine the area of the sub-polygon outside the ring. The area outside the ring is then subtracted from the area of the entire polygon to arrive at the inside area. This inside area is then divided by the tract's total area to determine the percentage of area within the ring. This process is repeated for each block group that is intersected by one of the rings. The total area, partial area, and percentage of partial area of those block groups within, or partially within a ring, are held in memory for the report.

On occasion, the algorithm described above is unable to determine the area of the partial area. Within the report program is a "Paint" routine which allows an enclosed shape to be highlighted. Another routine calculates the percentage of highlighted screen pixels to the pixels within the polygon. A manual entry is allowed. Both the "paint" method and manual entry method over ride the calculated method.

CENTRACTS lists, starting on page 4, all Block Groups in State, County, Census Tract, and Block Group ID order that lie within, or partially within, the maximum ring. Each Block Group is identified by a City or Town name and by the Block Group's State, County, Tract and Block Group ID number. Following is the Block Group's 1990 population and house count extracted from the Census Bureau's 1990 STF-1A files.

The next four columns display water source data from the 1990 STF-3A files. The first column is "Units with Public system or private company source of water", followed by "Units with individual well, Drilled, source of water"; "Units with individual well, Dug, source of water" and "Units with Other source of water".

For each ring, CENTRACTS then shows the Block Groups that are within that ring, the Block Group's total area in square miles, the partial area of the Block Group within that ring, and the partial percentage within the ring. The areas of the included Block Group and the partial areas are then totaled.

The last section tallies the demographic data within each ring. The percentage of area for each Block Group is multiplied times the census data for that Block Group and totaled for all Block Group's within the ring. Ring totals are then determined by subtracting the three mile data from the four mile, the two mile from the three mile, one from the two, etc... Population on private wells is calculated using the formula: ((Drilled + Dug Wells) / Households) * Population

No.	City	Block Group ID	Blk Grp People	House Holds	Public Water	Drilled Wells	Dug Wells	Other
1	Middlesex	34023 0001 1	1499	619	593	21	0	0
2	Middlesex	34023 0001 2	650	223	199	16	0	0
3	Middlesex	34023 0001 3	1653	557	510	33	0	0
4	Middlesex	34023 0001 5	932	324	307	17	0	0
5	Middlesex	34023 0002 1	1797	708	645	40	8	0
6	Middlesex	34023 0002 2	1158	467	464	0	0	0
7	Middlesex	34023 0002 3	1493	539	516	16	0	0
8	Middlesex	34023 0002 4	1007	460	485	0	0	0
9	Dunellen	34023 0003 1	1067	404	379	9	0	0
10	Dunellen	34023 0003 2	1294	494	488	0	0	0
11	Dunellen	34023 0003 3	1602	651	656	9	0	0
12	Dunellen	34023 0003 4	437	154	148	10	0	0
13	Dunellen	34023 0003 5	1506	575	582	7	0	0
14	Dunellen	34023 0003 6	622	218	208	0	0	0
15	Piscataway	34023 0007 1	1581	566	420	88	0	0
16	Piscataway	34023 0007 2	788	271	208	32	0	0
17	Piscataway	34023 0007 3	1646	558	488	63	8	0
18	Piscataway	34023 0007 4	639	190	199	41	0	0
19	Piscataway	34023 0007 5	1215	381	380	0	17	0
20	Piscataway	34023 0007 7	1245	395	396	9	0	0
21	Highland Park	34023 0011 2	887	325	321	0	0	0
22	Highland Park	34023 0011 3	1405	806	777	13	0	0
23	Edison	34023 0016 1	797	321	309	0	0	0
24	Edison	34023 0016 2	948	324	309	0	0	0
25	Edison	34023 0016 3	1028	397	375	0	0	0
26	Metuchen	34023 0020 1	1643	659	661	11	0	0
27	Metuchen	34023 0020 2	515	189	182	0	0	0
28	Metuchen	34023 0020 3	1272	402	396	0	0	0
29	Metuchen	34023 0022 2	972	397	386	0	0	0
30	Metuchen	34023 0022 3	1621	653	647	0	0	0
31	Piscataway	34023 0004011	1480	500	509	31	0	0
32	Piscataway	34023 0004012	1091	343	294	10	0	0
33	Piscataway	34023 0004013	1123	330	308	21	0	0
34	Piscataway	34023 0004031	621	203	184	17	0	0
35	Piscataway	34023 0004032	1568	521	361	146	21	0
36	Piscataway	34023 0004041	830	260	228	20	5	0
37	Piscataway	34023 0004042	847	354	329	24	0	0
38	Piscataway	34023 0004043	1756	564	485	57	5	0
39	Piscataway	34023 0004044	1114	529	520	23	6	0
40	Piscataway	34023 0005011	1223	389	235	91	46	0
41	Piscataway	34023 0005012	1699	527	491	45	6	0
42	Piscataway	34023 0005013	1718	572	513	56	5	0
43	Piscataway	34023 0005021	3147	1263	1225	0	0	0
44	Piscataway	34023 0005022	2785	1253	1267	24	0	0
45	Piscataway	34023 0006031	1423	456	346	52	5	0
46	Piscataway	34023 0006032	752	328	274	91	7	0
47	Piscataway	34023 0006041	1577	246	215	19	0	0
48	Piscataway	34023 0006042	3585	159	175	0	0	0
49	Piscataway	34023 0006043	3131	1132	1016	121	0	0
50	Piscataway	34023 0006051	2111	7	0	5	0	0
51	Piscataway	34023 0006052	416	122	105	6	7	0
52	Piscataway	34023 0006061	2107	621	592	9	7	0
53	Piscataway	34023 0006062	2743	860	864	15	0	0
54	South Plainfield	34023 0008011	585	198	196	5	0	0
55	South Plainfield	34023 0008012	1207	420	403	0	0	0
56	South Plainfield	34023 0008013	1369	452	433	35	0	0
57	South Plainfield	34023 0008014	515	171	159	10	0	0
58	South Plainfield	34023 0008021	1658	562	558	7	0	0

59	South Plainfield	34023	0008022	1058	367	364	0	0	0
60	South Plainfield	34023	0009011	624	220	205	6	0	0
61	South Plainfield	34023	0009012	1610	547	542	6	0	0
62	South Plainfield	34023	0009021	860	309	287	7	0	0
63	South Plainfield	34023	0009022	1075	367	407	0	0	0
64	South Plainfield	34023	0009023	1098	372	378	0	0	0
65	South Plainfield	34023	0009024	763	256	236	0	0	0
66	South Plainfield	34023	0009025	741	261	258	0	0	0
67	South Plainfield	34023	0010011	648	204	198	0	0	0
68	South Plainfield	34023	0010012	2083	673	679	0	0	0
69	South Plainfield	34023	0010021	94	32	35	0	0	0
70	South Plainfield	34023	0010022	549	178	169	0	0	0
71	South Plainfield	34023	0010023	2171	688	624	106	0	0
72	South Plainfield	34023	0010024	91	41	14	25	0	0
73	South Plainfield	34023	0010025	135	48	0	49	0	0
74	South Plainfield	34023	0010026	1089	351	270	60	9	0
75	South Plainfield	34023	0010027	466	106	83	0	0	0
76	Edison	34023	0014051	16	6	6	0	0	0
77	Edison	34023	0014052	532	177	161	0	0	0
78	Edison	34023	0014053	536	277	266	0	0	0
79	Edison	34023	0014054	1107	408	421	9	0	0
80	Edison	34023	0014055	865	298	293	0	0	0
81	Edison	34023	0014061	1056	337	346	6	0	0
82	Edison	34023	0014062	872	275	261	5	0	0
83	Edison	34023	0014063	1609	540	516	23	0	0
84	Edison	34023	0014064	1023	372	365	12	0	0
85	Edison	34023	0014071	589	182	175	0	0	0
86	Edison	34023	0014072	2073	668	657	28	0	0
87	Edison	34023	0014081	1127	353	351	9	0	0
88	Edison	34023	0014091	1008	301	274	16	0	0
89	Edison	34023	0014093	1165	333	331	5	0	0
90	Edison	34023	0014102	2844	1025	1003	0	0	0
91	Edison	34023	0014111	805	270	278	0	0	0
92	Edison	34023	0014121	991	485	484	8	0	0
93	Edison	34023	0014122	1692	573	518	35	13	0
94	Edison	34023	0014131	2657	1032	1009	0	0	0
95	Edison	34023	0014132	1373	386	345	64	0	0
96	Edison	34023	0015021	150	73	67	0	0	0
97	Edison	34023	0015022	1986	765	820	0	0	0
98	Edison	34023	0015023	1413	452	425	0	0	0
99	Edison	34023	0015024	359	120	116	0	0	0
100	Edison	34023	0015025	1348	500	495	0	0	0
101	Edison	34023	0015026	622	167	154	0	0	0
102	Edison	34023	0015031	7308	2591	2549	22	20	0
103	Edison	34023	0015041	962	265	248	0	0	0
104	Edison	34023	0015042	3215	1326	1339	8	0	0
105	Edison	34023	0015043	282	86	82	0	0	0
106	Edison	34023	0017011	1273	422	420	0	0	0
107	Edison	34023	0017012	1726	548	528	0	0	0
108	Edison	34023	0017013	2075	695	730	0	0	0
109	Edison	34023	0017014	580	196	183	0	0	0
110	Edison	34023	0017021	594	242	243	0	0	0
111	Edison	34023	0017022	1375	542	522	0	0	0
112	Edison	34023	0017023	801	260	245	0	0	0
113	Edison	34023	0017024	560	227	261	0	0	0
114	Metuchen	34023	0021011	449	166	154	0	0	0
115	Metuchen	34023	0021012	1083	395	401	6	0	0
116	Metuchen	34023	0021013	753	290	288	0	0	0
117	Metuchen	34023	0021021	902	377	357	0	0	0
118	Metuchen	34023	0021023	367	148	150	0	0	0
119	Metuchen	34023	0021024	1062	472	492	0	0	0
120	North Plainfield	34035	0518 1	817	322	321	0	8	0
121	North Plainfield	34035	0518 2	776	318	303	13	0	0
122	North Plainfield	34035	0518 3	1125	461	489	0	0	0

123	North Plainfield	34035	0518	4	775	277	244	0	0	0
124	North Plainfield	34035	0519	1	1007	360	337	17	0	0
125	North Plainfield	34035	0519	2	820	289	270	6	0	0
126	North Plainfield	34035	0519	3	820	296	312	0	0	0
127	North Plainfield	34035	0519	4	1121	436	439	0	0	0
128	Green Brook	34035	0521	1	1830	580	460	142	7	0
129	Green Brook	34035	0521	2	613	228	182	30	0	0
130	Green Brook	34035	0521	3	680	230	243	0	0	0
131	Green Brook	34035	0521	4	1337	420	276	115	3	0
132	North Plainfield	34035	0517982		1154	446	456	0	0	0
133	North Plainfield	34035	0517983		906	347	365	0	0	0
134	North Plainfield	34035	0517984		1226	439	417	7	0	0
135	North Plainfield	34035	0520022		2616	1338	1347	13	0	9
136	Scotch Plains	34039	0386	9	2446	943	925	39	0	0
137	Plainfield	34039	0389	4	2170	848	835	0	22	0
138	Plainfield	34039	0390	2	1334	593	511	0	0	0
139	Plainfield	34039	0390	3	1143	358	404	0	0	0
140	Plainfield	34039	0390	4	377	144	173	0	0	0
141	Plainfield	34039	0391	3	520	205	193	0	0	0
142	Plainfield	34039	0391	4	679	252	236	0	0	0
143	Plainfield	34039	0392	1	900	275	256	0	0	0
144	Plainfield	34039	0392	2	1380	467	495	0	0	0
145	Plainfield	34039	0392	3	1292	554	552	0	0	0
146	Plainfield	34039	0392	4	1081	490	483	0	0	0
147	Plainfield	34039	0393	1	872	271	256	0	0	0
148	Plainfield	34039	0393	2	361	114	111	0	0	0
149	Plainfield	34039	0393	3	1160	396	396	0	0	0
150	Plainfield	34039	0393	4	2556	787	805	0	0	0
151	Plainfield	34039	0394	1	1835	586	569	0	0	0
152	Plainfield	34039	0394	2	1709	479	451	14	0	0
153	Plainfield	34039	0394	3	1234	444	475	0	0	0
154	Plainfield	34039	0395	1	1922	561	546	0	0	0
155	Plainfield	34039	0395	2	869	245	227	0	0	0
156	Plainfield	34039	0395	3	596	173	178	0	0	0
157	Plainfield	34039	0395	4	1341	387	428	0	0	0
158	Plainfield	34039	0395	5	1308	348	335	0	0	0
159	Plainfield	34039	0396	1	1311	533	519	8	0	0
160	Plainfield	34039	0396	2	1169	476	451	0	0	0
161	Plainfield	34039	0396	3	1550	500	531	0	0	0
162	Plainfield	34039	0397	1	1253	466	431	0	0	0
163	Plainfield	34039	0397	2	1623	519	521	10	0	0
164	Plainfield	34039	0397	3	1580	513	500	4	0	0
165	Plainfield	34039	0397	4	1193	471	499	0	0	0
166	Plainfield	34039	0398	3	4	1	0	0	0	0
===	==========	==========			======	======	======	======	======	
	Totals:				205831	71398	68750	2308	235	9

City	Census Tract ID	Tract People	House Count	Public Water	Drilled Wells	Dug Wells	Other Sources
Dunellen	34023 0003 3	1602	651	656	9	0	0
Dunellen	34023 0003 4	437	154	148	10	0	0
Dunellen	34023 0003 5	1506	575	582	7	0	0
Dunellen	34023 0003 6	622	218	208	0	0	0
Dunellen	34023 0003 2	1294	494	488	0	0	0
Dunellen	34023 0003 1	1067	404	379	9	0	0
	Sub Totals:	6528	2496	2461	35	0	0
Edison	34023 0014093	1165	333	331	5	0	0
Edison	34023 0014111	805	270	278	0	0	0
Edison	34023 0014102	2844	1025	1003	0	0	0
Edison	34023 0014091	1008	301	274	16	0	0
Edison	34023 0014064	1023	372	365	12	0	0
Edison	34023 0014071	589	182	175	0	0	0
Edison	34023 0014072	2073	668	657	28	0	0
Edison	34023 0014081	1127	353	351	9	0	0
Edison	34023 0015023	1413	452	425	0	0	0
Edison	34023 0015024	359	120	116	0	0	0
Edison	34023 0015025	1348	500	495	0	0	0
Edison	34023 0015026	622	167	154	0	0	0
Edison	34023 0015031	7308	2591	2549	22	20	0
Edison	34023 0015041	962	265	248	0	0	0
Edison	34023 0015042	3215	1326	1339	8	0	0
Edison	34023 0015043	282	86	82	0	0	0
Edison	34023 0016 1	797	321	309	0	0	0
Edison	34023 0016 2	948	324	309	0	0	0
Edison	34023 0016 3	1028	397	375	0	0	0
Edison	34023 0017014	580	196	183	0	0	0
Edison	34023 0017021	594	242	243	0	0	0
Edison	34023 0017022	1375	542	522	0	0	0
Edison	34023 0017023	801	260	245	0	0	0
Edison	34023 0017024	560	227	261	0	0	0
Edison	34023 0014121	991	485	484	8	0	0
Edison	34023 0014122	1692	573	518	35	13	0
Edison	34023 0014131	2657	1032	1009	0	0	0
Edison	34023 0014132	1373	386	345	64	0	0
Edison	34023 0014051	16	6	6	0	0	0
Edison	34023 0014052	532	177	161	0	0	0
Edison	34023 0014053	536	277	266	0	0	0
Edison	34023 0014054	1107	408	421	9	0	0
Edison	34023 0014055	865	298	293	0	0	0
Edison	34023 0014061	1056	337	346	6	0	0
Edison	34023 0014062	872	275	261	5	0	0
Edison	34023 0014063	1609	540	516	23	0	0
Edison	34023 0017011	1273	422	420	0	0	0
Edison	34023 0017012	1726	548	528	0	0	0
Edison	34023 0017013	2075	695	730	0	0	0
Edison	34023 0015021	150	73	67	0	0	0
Edison	34023 0015022	1986	765	820	0	0	0
	Sub Totals:	53342	18817	18480	250	33	0
Green Brook	34035 0521 3	680	230	243	0	0	0
Green Brook	34035 0521 4	1337	420	276	115	3	0
Green Brook	34035 0521 2	613	228	182	30	0	0
Green Brook	34035 0521 1	1830	580	460	142	7	0
	Sub Totals:	4460	1458	1161	287	10	0

Highland Park	34023	0011 3	1405	806	777	13	0	0
Highland Park	34023	0011 2	887	325	321	0	0	0
Sub Totals:			2292	1131	1098	13	0	0
Metuchen	34023	0020 2	515	189	182	0	0	0
Metuchen	34023	0021013	753	290	288	0	0	0
Metuchen	34023	0021021	902	377	357	0	0	0
Metuchen	34023	0021012	1083	395	401	6	0	0
Metuchen	34023	0020 1	1643	659	661	11	0	0
Metuchen	34023	0021011	449	166	154	0	0	0
Metuchen	34023	0020 3	1272	402	396	0	0	0
Metuchen	34023	0021024	1062	472	492	0	0	0
Metuchen	34023	0022 3	1621	653	647	0	0	0
Metuchen	34023	0021023	367	148	150	0	0	0
Metuchen	34023	0022 2	972	397	386	0	0	0
Sub Totals:			10639	4148	4114	17	0	0
Middlesex	34023	0002 3	1493	539	516	16	0	0
Middlesex	34023	0001 2	650	223	199	16	0	0
Middlesex	34023	0001 1	1499	619	593	21	0	0
Middlesex	34023	0002 1	1797	708	645	40	8	0
Middlesex	34023	0002 4	1007	460	485	0	0	0
Middlesex	34023	0001 5	932	324	307	17	0	0
Middlesex	34023	0002 2	1158	467	464	0	0	0
Middlesex	34023	0001 3	1653	557	510	33	0	0
Sub Totals:			10189	3897	3719	143	8	0
North Plainfield	34035	0520022	2616	1338	1347	13	0	9
North Plainfield	34035	0518 3	1125	461	489	0	0	0
North Plainfield	34035	0519 4	1121	436	439	0	0	0
North Plainfield	34035	0519 3	820	296	312	0	0	0
North Plainfield	34035	0519 1	1007	360	337	17	0	0
North Plainfield	34035	0518 1	817	322	321	0	8	0
North Plainfield	34035	0518 2	776	318	303	13	0	0
North Plainfield	34035	0517982	1154	446	456	0	0	0
North Plainfield	34035	0518 4	775	277	244	0	0	0
North Plainfield	34035	0517984	1226	439	417	7	0	0
North Plainfield	34035	0519 2	820	289	270	6	0	0
North Plainfield	34035	0517983	906	347	365	0	0	0
Sub Totals:			13163	5329	5300	56	8	9
Piscataway	34023	0004013	1123	330	308	21	0	0
Piscataway	34023	0004012	1091	343	294	10	0	0
Piscataway	34023	0007 1	1581	566	420	88	0	0
Piscataway	34023	0007 2	788	271	208	32	0	0
Piscataway	34023	0007 3	1646	558	488	63	8	0
Piscataway	34023	0007 4	639	190	199	41	0	0
Piscataway	34023	0007 5	1215	381	380	0	17	0
Piscataway	34023	0007 7	1245	395	396	9	0	0
Piscataway	34023	0004011	1480	500	509	31	0	0
Piscataway	34023	0006062	2743	860	864	15	0	0
Piscataway	34023	0006061	2107	621	592	9	7	0
Piscataway	34023	0005021	3147	1263	1225	0	0	0
Piscataway	34023	0004031	621	203	184	17	0	0
Piscataway	34023	0004032	1568	521	361	146	21	0
Piscataway	34023	0004041	830	260	228	20	5	0
Piscataway	34023	0004042	847	354	329	24	0	0
Piscataway	34023	0004043	1756	564	485	57	5	0
Piscataway	34023	0004044	1114	529	520	23	6	0
Piscataway	34023	0005011	1223	389	235	91	46	0

Piscataway	34023	0005012	1699	527	491	45	6	0
Piscataway	34023	0005013	1718	572	513	56	5	0
Piscataway	34023	0006042	3585	159	175	0	0	0
Piscataway	34023	0005022	2785	1253	1267	24	0	0
Piscataway	34023	0006031	1423	456	346	52	5	0
Piscataway	34023	0006032	752	328	274	91	7	0
Piscataway	34023	0006041	1577	246	215	19	0	0
Piscataway	34023	0006051	2111	7	0	5	0	0
Piscataway	34023	0006043	3131	1132	1016	121	0	0
Piscataway	34023	0006052	416	122	105	6	7	0
Sub Totals:			45961	13900	12627	1116	145	0
Plainfield	34039	0390 2	1334	593	511	0	0	0
Plainfield	34039	0389 4	2170	848	835	0	22	0
Plainfield	34039	0395 5	1308	348	335	0	0	0
Plainfield	34039	0390 3	1143	358	404	0	0	0
Plainfield	34039	0390 4	377	144	173	0	0	0
Plainfield	34039	0391 3	520	205	193	0	0	0
Plainfield	34039	0391 4	679	252	236	0	0	0
Plainfield	34039	0392 1	900	275	256	0	0	0
Plainfield	34039	0392 2	1380	467	495	0	0	0
Plainfield	34039	0392 3	1292	554	552	0	0	0
Plainfield	34039	0392 4	1081	490	483	0	0	0
Plainfield	34039	0393 1	872	271	256	0	0	0
Plainfield	34039	0393 2	361	114	111	0	0	0
Plainfield	34039	0393 3	1160	396	396	0	0	0
Plainfield	34039	0393 4	2556	787	805	0	0	0
Plainfield	34039	0394 1	1835	586	569	0	0	0
Plainfield	34039	0394 2	1709	479	451	14	0	0
Plainfield	34039	0394 3	1234	444	475	0	0	0
Plainfield	34039	0395 1	1922	561	546	0	0	0
Plainfield	34039	0395 2	869	245	227	0	0	0
Plainfield	34039	0395 3	596	173	178	0	0	0
Plainfield	34039	0395 4	1341	387	428	0	0	0
Plainfield	34039	0398 3	4	1	0	0	0	0
Plainfield	34039	0397 1	1253	466	431	0	0	0
Plainfield	34039	0397 2	1623	519	521	10	0	0
Plainfield	34039	0396 1	1311	533	519	8	0	0
Plainfield	34039	0396 2	1169	476	451	0	0	0
Plainfield	34039	0396 3	1550	500	531	0	0	0
Plainfield	34039	0397 3	1580	513	500	4	0	0
Plainfield	34039	0397 4	1193	471	499	0	0	0
Sub Totals:			36322	12456	12367	36	22	0
Scotch Plains	34039	0386 9	2446	943	925	39	0	0
Sub Totals:			2446	943	925	39	0	0
South Plainfield	34023	0008012	1207	420	403	0	0	0
South Plainfield	34023	0008011	585	198	196	5	0	0
South Plainfield	34023	0009023	1098	372	378	0	0	0
South Plainfield	34023	0009024	763	256	236	0	0	0
South Plainfield	34023	0009025	741	261	258	0	0	0
South Plainfield	34023	0010011	648	204	198	0	0	0
South Plainfield	34023	0010012	2083	673	679	0	0	0
South Plainfield	34023	0010021	94	32	35	0	0	0
South Plainfield	34023	0010022	549	178	169	0	0	0
South Plainfield	34023	0010023	2171	688	624	106	0	0
South Plainfield	34023	0010024	91	41	14	25	0	0
South Plainfield	34023	0010025	135	48	0	49	0	0
South Plainfield	34023	0010026	1089	351	270	60	9	0
South Plainfield	34023	0010027	466	106	83	0	0	0

South Plainfield	34023	0008013	1369	452	433	35	0	0
South Plainfield	34023	0008014	515	171	159	10	0	0
South Plainfield	34023	0008021	1658	562	558	7	0	0
South Plainfield	34023	0008022	1058	367	364	0	0	0
South Plainfield	34023	0009011	624	220	205	6	0	0
South Plainfield	34023	0009012	1610	547	542	6	0	0
South Plainfield	34023	0009021	860	309	287	7	0	0
South Plainfield	34023	0009022	1075	367	407	0	0	0
		Sub Totals:	20489	6823	6498	316	9	0

For Radius of 4 Mi., Circle Area = 50.265482

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
1	Middlesex	34023 11	0.228787	0.141794	61.98
2	Middlesex	34023 12	0.085415	0.044848	52.51
3	Middlesex	34023 13	0.273870	0.146038	53.32
4	Middlesex	34023 15	0.689336	0.104906	15.22
5	Middlesex	34023 21	0.342588	0.342588	100.00
6	Middlesex	34023 22	0.519523	0.519523	100.00
7	Middlesex	34023 23	0.369543	0.369543	100.00
8	Middlesex	34023 24	0.357313	0.357313	100.00
9	Dunellen	34023 31	0.161886	0.161886	100.00
10	Dunellen	34023 32	0.197169	0.197169	100.00
11	Dunellen	34023 33	0.204389	0.204389	100.00
12	Dunellen	34023 34	0.082439	0.082439	100.00
13	Dunellen	34023 35	0.218675	0.218675	100.00
14	Dunellen	34023 36	0.143240	0.143240	100.00
15	Piscataway	34023 71	1.471070	0.820201	55.76
16	Piscataway	34023 72	0.560003	0.463882	82.84
17	Piscataway	34023 73	0.593017	0.588042	99.16
18	Piscataway	34023 74	0.533337	0.138217	25.92
19	Piscataway	34023 75	1.036701	0.491520	47.41
20	Piscataway	34023 77	0.637919	0.620009	97.19
21	Highland Park	34023 112	0.189912	0.009794	5.16
22	Highland Park	34023 113	0.370903	0.197896	53.36
23	Edison	34023 161	0.092294	0.028875	31.29
24	Edison	34023 162	0.099012	0.030282	30.58
25	Edison	34023 163	0.119202	0.002510	2.11
26	Metuchen	34023 201	0.282335	0.271505	96.16
27	Metuchen	34023 202	0.360552	0.360552	100.00
28	Metuchen	34023 203	0.285877	0.285877	100.00
29	Metuchen	34023 222	0.202436	0.166389	82.19
30	Metuchen	34023 223	0.209164	0.043901	20.99
31	Piscataway	34023 4011	0.331479	0.331479	100.00
32	Piscataway	34023 4012	0.247472	0.247472	100.00
33	Piscataway	34023 4013	0.259581	0.259581	100.00
34	Piscataway	34023 4031	0.323227	0.323227	100.00
35	Piscataway	34023 4032	0.496303	0.496303	100.00
36	Piscataway	34023 4041	0.112112	0.112112	100.00
37	Piscataway	34023 4042	0.123490	0.123490	100.00
38	Piscataway	34023 4043	0.437132	0.437132	100.00
39	Piscataway	34023 4044	0.254316	0.254316	100.00
40	Piscataway	34023 5011	0.179582	0.179582	100.00
41	Piscataway	34023 5012	0.310214	0.310214	100.00
42	Piscataway	34023 5013	0.452128	0.452128	100.00
43	Piscataway	34023 5021	0.555262	0.555262	100.00
44	Piscataway	34023 5022	0.358900	0.358900	100.00
45	Piscataway	34023 6031	1.150131	1.150131	100.00
46	Piscataway	34023 6032	2.847948	2.847948	100.00
47	Piscataway	34023 6041	0.678112	0.548904	80.95
48	Piscataway	34023 6042	0.363628	0.363628	100.00
49	Piscataway	34023 6043	0.703175	0.703175	100.00
50	Piscataway	34023 6051	0.452059	0.452059	100.00
51	Piscataway	34023 6052	0.922357	0.785875	85.20
52	Piscataway	34023 6061	0.561422	0.561422	100.00
53	Piscataway	34023 6062	1.377315	1.377315	100.00
54	South Plainfield	34023 8011	0.093707	0.093707	100.00
55	South Plainfield	34023 8012	0.235331	0.235331	100.00
56	South Plainfield	34023 8013	0.221565	0.221565	100.00

57	South Plainfield	34023	8014	0.141616	0.141616	100.00
58	South Plainfield	34023	8021	0.287571	0.287571	100.00
59	South Plainfield	34023	8022	0.350541	0.350541	100.00
60	South Plainfield	34023	9011	0.191750	0.191750	100.00
61	South Plainfield	34023	9012	0.381476	0.381476	100.00
62	South Plainfield	34023	9021	0.155109	0.155109	100.00
63	South Plainfield	34023	9022	0.377850	0.377850	100.00
64	South Plainfield	34023	9023	0.164715	0.164715	100.00
65	South Plainfield	34023	9024	0.186632	0.186632	100.00
66	South Plainfield	34023	9025	0.113769	0.113769	100.00
67	South Plainfield	34023	10011	0.226857	0.226857	100.00
68	South Plainfield	34023	10012	0.459885	0.459885	100.00
69	South Plainfield	34023	10021	0.531211	0.531211	100.00
70	South Plainfield	34023	10022	0.176176	0.176176	100.00
71	South Plainfield	34023	10023	0.920210	0.920210	100.00
72	Plainfield	34039	3983	0.004646	0.004356	93.75
73	South Plainfield	34023	10025	0.438385	0.438385	100.00
74	South Plainfield	34023	10026	1.124393	1.124393	100.00
75	South Plainfield	34023	10027	0.848394	0.848394	100.00
76	Edison	34023	14051	0.633545	0.633545	100.00
77	Edison	34023	14052	0.167145	0.167145	100.00
78	Edison	34023	14053	0.184653	0.184653	100.00
79	Edison	34023	14054	0.176407	0.176407	100.00
80	Edison	34023	14055	0.239980	0.239980	100.00
81	Edison	34023	14061	0.438917	0.438917	100.00
82	Edison	34023	14062	0.302381	0.302381	100.00
83	Edison	34023	14063	0.498002	0.498002	100.00
84	Edison	34023	14064	0.531088	0.531088	100.00
85	Edison	34023	14071	0.121000	0.001160	0.96
86	Edison	34023	14072	0.598560	0.095237	15.91
87	Edison	34023	14081	0.290569	0.182543	62.82
88	Edison	34023	14091	0.334183	0.115258	34.49
89	Edison	34023	14093	0.183589	0.111151	60.54
90	Edison	34023	14102	0.410069	0.075154	18.33
91	Edison	34023	14111	0.377480	0.004748	1.26
92	Edison	34023	14121	0.252884	0.125075	49.46
93	Edison	34023	14122	1.391902	1.391902	100.00
94	Edison	34023	14131	0.859704	0.841664	97.90
95	Edison	34023	14132	0.412560	0.412560	100.00
96	Edison	34023	15021	0.436094	0.436094	100.00
97	Edison	34023	15022	0.329842	0.329842	100.00
98	Edison	34023	15023	0.269341	0.269341	100.00
99	Edison	34023	15024	0.044373	0.040388	91.02
100	Edison	34023	15025	0.219974	0.172936	78.62
101	Edison	34023	15026	0.088045	0.065691	74.61
102	Edison	34023	15031	1.949390	1.949390	100.00
103	Edison	34023	15041	0.347113	0.347113	100.00
104	Edison	34023	15042	0.570127	0.570127	100.00
105	Edison	34023	15043	0.479315	0.479315	100.00
106	Edison	34023	17011	0.706479	0.167044	23.64
107	Edison	34023	17012	0.403172	0.231527	57.43
108	Edison	34023	17013	0.280840	0.220000	78.34
109	Edison	34023	17014	0.076085	0.003110	4.09
110	Edison	34023	17021	0.065963	0.065963	100.00
111	Edison	34023	17022	0.228625	0.077981	34.11
112	Edison	34023	17023	0.115125	0.051718	44.92
113	Edison	34023	17024	0.164242	0.018449	11.23
114	Metuchen	34023	21011	0.099300	0.099300	100.00
115	Metuchen	34023	21012	0.203795	0.200378	98.32
116	Metuchen	34023	21013	0.159626	0.064660	40.51
117	Metuchen	34023	21021	0.283760	0.023795	8.39
118	Metuchen	34023	21023	0.074471	0.002300	3.09
119	Metuchen	34023	21024	0.139126	0.000115	0.08
120	North Plainfield	34035	5181	0.131806	0.086583	65.69

121	North Plainfield	34035 5182	0.097765	0.097765	100.00
122	North Plainfield	34035 5183	0.101817	0.101817	100.00
123	North Plainfield	34035 5184	0.263324	0.263324	100.00
124	North Plainfield	34035 5191	0.187756	0.187756	100.00
125	North Plainfield	34035 5192	0.237057	0.237057	100.00
126	North Plainfield	34035 5193	0.145688	0.145688	100.00
127	North Plainfield	34035 5194	0.220625	0.220625	100.00
128	Green Brook	34035 5211	2.441930	1.354314	55.46
129	Green Brook	34035 5212	0.193921	0.193921	100.00
130	Green Brook	34035 5213	0.297200	0.297200	100.00
131	Green Brook	34035 5214	1.692263	0.529793	31.31
132	North Plainfield	34035 517982	0.091773	0.027539	30.01
133	North Plainfield	34035 517983	0.081453	0.072927	89.53
134	North Plainfield	34035 517984	0.094732	0.080675	85.16
135	North Plainfield	34035 520022	0.256376	0.150713	58.79
136	Scotch Plains	34039 3869	2.411071	0.872062	36.17
137	Plainfield	34039 3894	0.180431	0.035106	19.46
138	Plainfield	34039 3902	0.122254	0.020390	16.68
139	Plainfield	34039 3903	0.091308	0.087196	95.50
140	Plainfield	34039 3904	0.050803	0.050803	100.00
141	Plainfield	34039 3913	0.240646	0.161678	67.18
142	Plainfield	34039 3914	0.168928	0.010465	6.19
143	Plainfield	34039 3921	0.174185	0.109690	62.97
144	Plainfield	34039 3922	0.169279	0.156498	92.45
145	Plainfield	34039 3923	0.089569	0.089569	100.00
146	Plainfield	34039 3924	0.060343	0.060343	100.00
147	Plainfield	34039 3931	0.071219	0.071219	100.00
148	Plainfield	34039 3932	0.068071	0.068071	100.00
149	Plainfield	34039 3933	0.064962	0.064962	100.00
150	Plainfield	34039 3934	0.139126	0.139126	100.00
151	Plainfield	34039 3941	0.144488	0.144488	100.00
152	Plainfield	34039 3942	0.242111	0.242111	100.00
153	Plainfield	34039 3943	0.254363	0.254363	100.00
154	Plainfield	34039 3951	0.140181	0.140181	100.00
155	Plainfield	34039 3952	0.080300	0.080300	100.00
156	Plainfield	34039 3953	0.137544	0.137544	100.00
157	Plainfield	34039 3954	0.131798	0.131798	100.00
158	Plainfield	34039 3955	0.082213	0.082213	100.00
159	Plainfield	34039 3961	0.223610	0.223610	100.00
160	Plainfield	34039 3962	0.195540	0.195540	100.00
161	Plainfield	34039 3963	0.173982	0.173982	100.00
162	Plainfield	34039 3971	0.284054	0.284054	100.00
163	Plainfield	34039 3972	0.214407	0.214407	100.00
164	Plainfield	34039 3973	0.318250	0.318250	100.00
165	Plainfield	34039 3974	0.168195	0.168195	100.00
166	South Plainfield	34023 10024	0.538627	0.538627	100.00
	Totals:		62.153210	50.206638	

For Radius of 3 Mi., Circle Area = 28.274334

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
5	Middlesex	34023 21	0.342588	0.082988	24.22
6	Middlesex	34023 22	0.519523	0.362029	69.68
9	Dunellen	34023 31	0.161886	0.161332	99.66
10	Dunellen	34023 32	0.197169	0.177462	90.01
11	Dunellen	34023 33	0.204389	0.178302	87.24
12	Dunellen	34023 34	0.082439	0.082439	100.00
13	Dunellen	34023 35	0.218675	0.218675	100.00
14	Dunellen	34023 36	0.143240	0.143240	100.00

15	Piscataway	34023	71	1.471070	0.005000	0.34
16	Piscataway	34023	72	0.560003	0.018330	3.27
17	Piscataway	34023	73	0.593017	0.089048	15.02
18	Piscataway	34023	74	0.533337	0.006178	1.16
19	Piscataway	34023	75	1.036701	0.001187	0.11
20	Piscataway	34023	77	0.637919	0.196839	30.86
27	Metuchen	34023	202	0.360552	0.105868	29.36
28	Metuchen	34023	203	0.285877	0.001232	0.43
31	Piscataway	34023	4011	0.331479	0.331479	100.00
32	Piscataway	34023	4012	0.247472	0.247472	100.00
33	Piscataway	34023	4013	0.259581	0.259581	100.00
34	Piscataway	34023	4031	0.323227	0.111224	34.41
35	Piscataway	34023	4032	0.496303	0.490747	98.88
36	Piscataway	34023	4041	0.112112	0.112112	100.00
37	Piscataway	34023	4042	0.123490	0.123490	100.00
38	Piscataway	34023	4043	0.437132	0.437132	100.00
39	Piscataway	34023	4044	0.254316	0.254316	100.00
40	Piscataway	34023	5011	0.179582	0.179582	100.00
41	Piscataway	34023	5012	0.310214	0.310214	100.00
42	Piscataway	34023	5013	0.452128	0.452128	100.00
43	Piscataway	34023	5021	0.555262	0.555262	100.00
44	Piscataway	34023	5022	0.358900	0.358900	100.00
45	Piscataway	34023	6031	1.150131	1.147751	99.79
46	Piscataway	34023	6032	2.847948	2.767967	97.19
49	Piscataway	34023	6043	0.703175	0.591334	84.09
50	Piscataway	34023	6051	0.452059	0.399015	88.27
51	Piscataway	34023	6052	0.922357	0.004937	0.54
52	Piscataway	34023	6061	0.561422	0.561422	100.00
53	Piscataway	34023	6062	1.377315	1.377315	100.00
54	South Plainfield	34023	8011	0.093707	0.093707	100.00
55	South Plainfield	34023	8012	0.235331	0.235331	100.00
56	South Plainfield	34023	8013	0.221565	0.221565	100.00
57	South Plainfield	34023	8014	0.141616	0.141616	100.00
58	South Plainfield	34023	8021	0.287571	0.287571	100.00
59	South Plainfield	34023	8022	0.350541	0.350541	100.00
60	South Plainfield	34023	9011	0.191750	0.191750	100.00
61	South Plainfield	34023	9012	0.381476	0.381476	100.00
62	South Plainfield	34023	9021	0.155109	0.154825	99.82
63	South Plainfield	34023	9022	0.377850	0.377850	100.00
64	South Plainfield	34023	9023	0.164715	0.164715	100.00
65	South Plainfield	34023	9024	0.186632	0.186632	100.00
66	South Plainfield	34023	9025	0.113769	0.113769	100.00
67	South Plainfield	34023	10011	0.226857	0.226857	100.00
68	South Plainfield	34023	10012	0.459885	0.459885	100.00
69	South Plainfield	34023	10021	0.531211	0.531211	100.00
70	South Plainfield	34023	10022	0.176176	0.176176	100.00
71	South Plainfield	34023	10023	0.920210	0.920210	100.00
73	South Plainfield	34023	10025	0.438385	0.438385	100.00
74	South Plainfield	34023	10026	1.124393	1.124393	100.00
75	South Plainfield	34023	10027	0.848394	0.848394	100.00
76	Edison	34023	14051	0.633545	0.633545	100.00
77	Edison	34023	14052	0.167145	0.167145	100.00
78	Edison	34023	14053	0.184653	0.184653	100.00
79	Edison	34023	14054	0.176407	0.176407	100.00
80	Edison	34023	14055	0.239980	0.199646	83.19
81	Edison	34023	14061	0.438917	0.438917	100.00
82	Edison	34023	14062	0.302381	0.078719	26.03
83	Edison	34023	14063	0.498002	0.222328	44.64
84	Edison	34023	14064	0.531088	0.012094	2.28
93	Edison	34023	14122	1.391902	0.673054	48.35
94	Edison	34023	14131	0.859704	0.134462	15.64
95	Edison	34023	14132	0.412560	0.018567	4.50
102	Edison	34023	15031	1.949390	0.930725	47.74
103	Edison	34023	15041	0.347113	0.347113	100.00

104	Edison	34023 15042	0.570127	0.541234	94.93
105	Edison	34023 15043	0.479315	0.295450	61.64
125	North Plainfield	34035 5192	0.237057	0.005633	2.38
126	North Plainfield	34035 5193	0.145688	0.056218	38.59
128	Green Brook	34035 5211	2.441930	0.078178	3.20
150	Plainfield	34039 3934	0.139126	0.000426	0.31
151	Plainfield	34039 3941	0.144488	0.106649	73.81
152	Plainfield	34039 3942	0.242111	0.138068	57.03
153	Plainfield	34039 3943	0.254363	0.254363	100.00
154	Plainfield	34039 3951	0.140181	0.140181	100.00
155	Plainfield	34039 3952	0.080300	0.080300	100.00
156	Plainfield	34039 3953	0.137544	0.137544	100.00
157	Plainfield	34039 3954	0.131798	0.131798	100.00
158	Plainfield	34039 3955	0.082213	0.082213	100.00
159	Plainfield	34039 3961	0.223610	0.173309	77.51
160	Plainfield	34039 3962	0.195540	0.195540	100.00
161	Plainfield	34039 3963	0.173982	0.173982	100.00
163	Plainfield	34039 3972	0.214407	0.069198	32.27
164	Plainfield	34039 3973	0.318250	0.305911	96.12
165	Plainfield	34039 3974	0.168195	0.031626	18.80
166	South Plainfield	34023 10024	0.538627	0.538627	100.00
	Totals:		42.622768	28.284212	

For Radius of 2 Mi., Circle Area = 12.566371

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
13	Dunellen	34023 35	0.218675	0.023220	10.62
14	Dunellen	34023 36	0.143240	0.017424	12.16
31	Piscataway	34023 4011	0.331479	0.223952	67.56
32	Piscataway	34023 4012	0.247472	0.038214	15.44
33	Piscataway	34023 4013	0.259581	0.041952	16.16
35	Piscataway	34023 4032	0.496303	0.006647	1.34
36	Piscataway	34023 4041	0.112112	0.112112	100.00
37	Piscataway	34023 4042	0.123490	0.123490	100.00
38	Piscataway	34023 4043	0.437132	0.437132	100.00
39	Piscataway	34023 4044	0.254316	0.159631	62.77
40	Piscataway	34023 5011	0.179582	0.115203	64.15
41	Piscataway	34023 5012	0.310214	0.100792	32.49
42	Piscataway	34023 5013	0.452128	0.452128	100.00
43	Piscataway	34023 5021	0.555262	0.555262	100.00
44	Piscataway	34023 5022	0.358900	0.358900	100.00
45	Piscataway	34023 6031	1.150131	0.211223	18.37
46	Piscataway	34023 6032	2.847948	1.828891	64.22
52	Piscataway	34023 6061	0.561422	0.520856	92.77
53	Piscataway	34023 6062	1.377315	0.363921	26.42
54	South Plainfield	34023 8011	0.093707	0.040555	43.28
55	South Plainfield	34023 8012	0.235331	0.110820	47.09
56	South Plainfield	34023 8013	0.221565	0.191655	86.50
57	South Plainfield	34023 8014	0.141616	0.141616	100.00
58	South Plainfield	34023 8021	0.287571	0.287571	100.00
59	South Plainfield	34023 8022	0.350541	0.350541	100.00
61	South Plainfield	34023 9012	0.381476	0.293877	77.04
63	South Plainfield	34023 9022	0.377850	0.078661	20.82
64	South Plainfield	34023 9023	0.164715	0.164715	100.00
65	South Plainfield	34023 9024	0.186632	0.025067	13.43
68	South Plainfield	34023 10012	0.459885	0.306589	66.67
69	South Plainfield	34023 10021	0.531211	0.477922	89.97
70	South Plainfield	34023 10022	0.176176	0.176176	100.00
71	South Plainfield	34023 10023	0.920210	0.920210	100.00

73	South Plainfield	34023 10025	0.438385	0.438385	100.00
74	South Plainfield	34023 10026	1.124393	1.124393	100.00
75	South Plainfield	34023 10027	0.848394	0.848394	100.00
76	Edison	34023 14051	0.633545	0.274796	43.37
77	Edison	34023 14052	0.167145	0.037196	22.25
78	Edison	34023 14053	0.184653	0.019935	10.80
103	Edison	34023 15041	0.347113	0.106302	30.62
104	Edison	34023 15042	0.570127	0.016923	2.97
166	South Plainfield	34023 10024	0.538627	0.538627	100.00
	Totals:		19.797569	12.661878	

For Radius of 1 Mi., Circle Area = 3.141593

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
38	Piscataway	34023 4043	0.437132	0.004816	1.10
43	Piscataway	34023 5021	0.555262	0.256123	46.13
44	Piscataway	34023 5022	0.358900	0.332352	92.60
46	Piscataway	34023 6032	2.847948	0.291058	10.22
70	South Plainfield	34023 10022	0.176176	0.075150	42.66
71	South Plainfield	34023 10023	0.920210	0.845125	91.84
73	South Plainfield	34023 10025	0.438385	0.340533	77.68
74	South Plainfield	34023 10026	1.124393	0.261006	23.21
75	South Plainfield	34023 10027	0.848394	0.258190	30.43
166	South Plainfield	34023 10024	0.538627	0.477239	88.60
	Totals:		8.245426	3.141593	

For Radius of .5 Mi., Circle Area = 0.785398

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
43	Piscataway	34023 5021	0.555262	0.007357	1.32
44	Piscataway	34023 5022	0.358900	0.081979	22.84
46	Piscataway	34023 6032	2.847948	0.002548	0.09
71	South Plainfield	34023 10023	0.920210	0.336864	36.61
73	South Plainfield	34023 10025	0.438385	0.100391	22.90
166	South Plainfield	34023 10024	0.538627	0.256259	47.58
	Totals:		5.659332	0.785398	

For Radius of .25 Mi., Circle Area = 0.196350

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
71	South Plainfield	34023 10023	0.920210	0.089673	9.74
166	South Plainfield	34023 10024	0.538627	0.106676	19.81
	Totals:		1.458837	0.196350	

S. Plainfield, NJ

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==================  Site Data  =================

                   Population: 170628.97
                   Households:  58346.81
               Drilled Wells:   1959.00
                   Dug Wells:    199.31
         Other Water Sources:      5.29


============ Partial (RING) data ===============

 ---- Within Ring: 4 Mile(s) and 3 Mile(s) ----

                   Population:  79893.00
                   Households:  27518.49
               Drilled Wells:    672.00
                   Dug Wells:     58.50
         Other Water Sources:      5.29

 ** Population On Private Wells:   2120.83


 ---- Within Ring: 3 Mile(s) and 2 Mile(s) ----

                   Population:  58138.11
                   Households:  19412.60
               Drilled Wells:    615.38
                   Dug Wells:     69.40
         Other Water Sources:      0.00

 ** Population On Private Wells:   2050.83


 ---- Within Ring: 2 Mile(s) and 1 Mile(s) ----

                   Population:  25662.93
                   Households:   8737.96
               Drilled Wells:    467.97
                   Dug Wells:     68.55
         Other Water Sources:      0.00

 ** Population On Private Wells:   1575.75


 ---- Within Ring: 1 Mile(s) and .5 Mile(s) ----

                   Population:   5387.46
                   Households:   2092.17
               Drilled Wells:    136.16
                   Dug Wells:      2.85
         Other Water Sources:      0.00

 ** Population On Private Wells:    357.97
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---- Within Ring: .5 Mile(s) and .25 Mile(s) ----

Population:	1317.88
Households:	510.43
Drilled Wells:	52.20
Dug Wells:	0.01
Other Water Sources:	0.00

** Population On Private Wells: 134.80

---- Within Ring: .25 Mile(s) and 0 Mile(s) ----

Population:	229.58
Households:	75.16
Drilled Wells:	15.28
Dug Wells:	0.00
Other Water Sources:	0.00

** Population On Private Wells: 46.67

** Total Population On Private Wells: 6286.85

REFERENCE 26

EPA United States Environmental Protection Agency
Office of Water

Office of Ground Water and Drinking Water

Current Drinking Water Standards

National Primary and Secondary Drinking Water Regulations

National Primary Drinking Water Regulations (NPDWRs or primary standards) are legally enforceable standards that apply to public water systems. Primary standards protect drinking water quality by limiting the levels of specific contaminants that can adversely affect public health and are known or anticipated to occur in public water systems. Table 1 divides these contaminants into Inorganic Chemicals, Organic Chemicals, Radionuclides, and Microorganisms. See Setting Standards for Safe Drinking Water to learn about EPA's standard-setting process.

National Primary Drinking Water Regulations

Contaminants	MCLG[1] (mg/L)[4]	MCL[2] or TT[3] (mg/L)[4]	Potential Health Effects from Ingestion of Water	Sources of Contaminant in Drinking Water	
Inorganic Chemicals					
Antimony	0.006	0.006	Increase in blood cholesterol; decrease in blood glucose	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder	
Arsenic	none[5]	0.05	Skin damage; circulatory system problems; increased risk of cancer	Discharge from semiconductor manufacturing; petroleum refining; wood preservatives; animal feed additives; herbicides; erosion of natural deposits	
Asbestos (fiber >10 micrometers)	7 million fibers per Liter	7 MFL	Increased risk of developing benign intestinal polyps	Decay of asbestos cement in water mains; erosion of natural deposits	
Barium	2	2	Increase in blood pressure	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	
Beryllium	0.004	0.004	Intestinal lesions	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries	
Cadmium	0.005	0.005	Kidney damage	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints	
Chromium (total)	0.1	0.1	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis	Discharge from steel and pulp mills; erosion of natural deposits	
Copper	1.3	Action Level=1.3; TT[6]	Short term exposure: Gastrointestinal distress. Long term exposure: Liver or kidney damage. Those with Wilson's Disease should consult their personal doctor if		Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood

			their water systems exceed the copper action level.		preservatives
Cyanide (as free cyanide)	0.2	0.2	Nerve damage or thyroid problems	Discharge from steel/metal factories; discharge from plastic and fertilizer factories	
Fluoride	4.0	4.0	Bone disease (pain and tenderness of the bones); Children may get mottled teeth.	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories	
Lead	zero	Action Level=0.015; TT6	Infants and children: Delays in physical or mental development. Adults: Kidney problems; high blood pressure	Corrosion of household plumbing systems; erosion of natural deposits	
Inorganic Mercury	0.002	0.002	Kidney damage	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and cropland	
Nitrate (measured as Nitrogen)	10	10	"Blue baby syndrome" in infants under six months - life threatening without immediate medical attention. Symptoms: Infant looks blue and has shortness of breath.	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	
Nitrite (measured as Nitrogen)	1	1	"Blue baby syndrome" in infants under six months - life threatening without immediate medical attention. Symptoms: Infant looks blue and has shortness of breath.	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	
Selenium	0.05	0.05	Hair or fingernail loss; numbness in fingers or toes; circulatory problems	Discharge from petroleum refineries; erosion of natural deposits; discharge from mines	
Thallium	0.0005	0.002	Hair loss; changes in blood; kidney, intestine, or liver problems	Leaching from ore-processing sites; discharge from electronics, glass, and pharmaceutical companies	
Organic Chemicals					
Acrylamide	zero	TT7	Nervous system or blood problems; increased risk of cancer	Added to water during sewage/wastewater treatment	
Alachlor	zero	0.002	Eye, liver, kidney or spleen problems; anemia; increased risk of cancer	Runoff from herbicide used on row crops	
Atrazine	0.003	0.003	Cardiovascular system problems; reproductive difficulties	Runoff from herbicide used on row crops	
Benzene	zero	0.005	Anemia; decrease in blood platelets; increased risk of cancer	Discharge from factories; leaching from gas storage tanks and landfills	
Benzo(a)pyrene	zero	0.0002	Reproductive difficulties; increased risk of cancer	Leaching from linings of water storage tanks and distribution lines	
Carbofuran	0.04	0.04	Problems with blood or nervous system; reproductive difficulties.	Leaching of soil fumigant used on rice and alfalfa	
Carbon tetrachloride	zero	.005	Liver problems; increased risk of cancer	Discharge from chemical plants and other industrial activities	
Chlordane	zero	0.002	Liver or nervous system problems; increased risk of cancer	Residue of banned termiticide	
Chlorobenzene	0.1	0.1	Liver or kidney problems	Discharger from chemical and agricultural chemical factories	

2,4-D	0.07	0.07	Kidney, liver, or adrenal gland problems	Runoff from herbicide used on row crops
Dalapon	0.2	0.2	Minor kidney changes	Runoff from herbicide used on rights of way
1,2-Dibromo-3-chloropropane (DBCP)	zero	0.0002	Reproductive difficulties; increased risk of cancer	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
o-Dichlorobenzene	0.6	0.6	Liver, kidney, or circulatory system problems	Discharge from industrial chemical factories
p-Dichlorobenzene	0.075	0.075	Anemia; liver, kidney or spleen damage; changes in blood	Discharge from industrial chemical factories
1,2-Dichloroethane	zero	0.005	Increased risk of cancer	Discharge from industrial chemical factories
1-1-Dichloroethylene	0.007	0.007	Liver problems	Discharge from industrial chemical factories
cis-1, 2-Dichloroethylene	0.07	0.07	Liver problems	Discharge from industrial chemical factories
trans-1,2-Dichloroethylene	0.1	0.1	Liver problems	Discharge from industrial chemical factories
Dichloromethane	zero	0.005	Liver problems; increased risk of cancer	Discharge from pharmaceutical and chemical factories
1-2-Dichloropropane	zero	0.005	Increased risk of cancer	Discharge from industrial chemical factories
Di(2-ethylhexyl)adipate	0.4	0.4	General toxic effects or reproductive difficulties	Leaching from PVC plumbing systems; discharge from chemical factories
Di(2-ethylhexyl)phthalate	zero	0.006	Reproductive difficulties; liver problems; increased risk of cancer	Discharge from rubber and chemical factories
Dinoseb	0.007	0.007	Reproductive difficulties	Runoff from herbicide used on soybeans and vegetables
Dioxin (2,3,7,8-TCDD)	zero	0.00000003	Reproductive difficulties; increased risk of cancer	Emissions from waste incineration and other combustion; discharge from chemical factories
Diquat	0.02	0.02	Cataracts	Runoff from herbicide use
Endothall	0.1	0.1	Stomach and intestinal problems	Runoff from herbicide use
Endrin	0.002	0.002	Nervous system effects	Residue of banned insecticide
Epichlorohydrin	zero	TT7	Stomach problems; reproductive difficulties; increased risk of cancer	Discharge from industrial chemical factories; added to water during treatment process
Ethylbenzene	0.7	0.7	Liver or kidney problems	Discharge from petroleum refineries
Ethelyne dibromide	zero	0.00005	Stomach problems; reproductive difficulties; increased risk of cancer	Discharge from petroleum refineries
Glyphosate	0.7	0.7	Kidney problems; reproductive difficulties	Runoff from herbicide use
Heptachlor	zero	0.0004	Liver damage; increased risk of cancer	Residue of banned termiticide
Heptachlor epoxide	zero	0.0002	Liver damage; increased risk of cancer	Breakdown of hepatachlor
Hexachlorobenzene	zero	0.001	Liver or kidney problems; reproductive difficulties; increased risk of cancer	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclopentadiene	0.05	0.05	Kidney or stomach problems	Discharge from chemical factories
Lindane	0.0002	0.0002	Liver or kidney problems	Runoff/leaching from insecticide used on catttle, lumber, gardens
Methoxychlor	0.04	0.04	Reproductive difficulties	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
Oxamyl (Vydate)	0.2	0.2	Slight nervous system effects	Runoff/leaching from insecticide used on apples, potatoes, and tomatoes

Polychlorinated biphenyls (PCBs)	zero	0.0005	Skin changes; thymus gland problems; immune difficiencies; reproductive or nervous system difficulties; increased risk of cancer	Runoff from landfils; discharge of waste chemicals
Pentachlorophenol	zero	0.001	Liver or kidney problems; increased risk of cancer	Discharge from wood preserving factories
Picloram	0.5	0.5	Liver problems	Herbicide runoff
Simazine	0.004	0.004	Problems with blood	Herbicide runoff
Styrene	0.1	0.1	Liver, kidney, and circulatory problems	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene	zero	0.005	Liver problems; increased risk of cancer	Leaching from PVC pipes; discharge from factories and dry cleaners
Toluene	1	1	Nervous system, kidney, or liver problems	Discharge from petroleum factories
Total Trihalomethanes (TTHMs)	none5	0.10	Liver, kidney or central nervous system problems; increased risk of cancer	Byproduct of drinking water disinfection
Toxaphene	zero	0.003	Kidney, liver, or thyroid problems; increased risk of cancer	Runoff/leaching from insecticide used on cotton and cattle
2,4,5-TP (Silvex)	0.05	0.05	Liver problems	Residue of banned herbicide
1,2,4-Trichlorobenzene	0.07	0.07	Changes in adrenal glands	Discharge from textile finishing factories
1,1,1-Trichloroethane	0.20	0.2	Liver, nervous system, or circulatory problems	Discharge from metal degreasing sites and other factories
1,1,2-Trichloroethane	0.003	0.005	Liver, kidney, or immune system problems	Discharge from industrial chemical factories
Trichloroethylene	zero	0.005	Liver problems; increased risk of cancer	Discharge from petroleum refineries
Vinyl chloride	zero	0.002	Increased risk of cancer	Leaching from PVC pipes; discharge from plastic factories
Xylenes (total)	10	10	Nervous system damage	Discharge from petroleum factories; discharge from chemical factories
Radionuclides				
Beta particles and photon emitters	none5	4 millirems per year	Increased risk of cancer	Decay of natural and man-made deposits
Gross alpha particle activity	none5	15 picocuries per Liter (pCi/L)	Increased risk of cancer	Erosion of natural deposits
Radium 226 and Radium 228 (combined)	none5	5 pCi/L	Increased risk of cancer	Erosion of natural deposits
Microorganisms				
Giardia lamblia	zero	TT8	Giardiasis, a gastroenteric disease	Human and animal fecal waste
Heterotrophic plate count	N/A	TT8	HPC has no health effects, but can indicate how effective treatment is at controlling microorganisms.	n/a
Legionella	zero	TT8	Legionnaire's Disease, commonly known as pneumonia	Found naturally in water; multiplies in heating systems
Total Coliforms (including fecal coliform and *E. Coli*)	zero	5.0%9	Used as an indicator that other potentially harmful bacteria may be present10	Human and animal fecal waste
Turbidity	N/A	TT8	Turbidity has no health effects but can interfere with disinfection and provide a medium for microbial growth. It may indicate the presence of microbes.	Soil runoff
Viruses (enteric)	zero	TT8	Gastroenteric disease	Human and animal fecal waste

Table 1

National Secondary Drinking Water Regulations

National Secondary Drinking Water Regulations (NSDWRs or secondary standards) are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. EPA recommends secondary standards to water systems but does not require systems to comply. However, states may choose to adopt them as enforceable standards. See Table 2.

Contaminant	Secondary Standard
Aluminum	0.05 to 0.2 mg/L
Chloride	250 mg/L
Color	15 (color units)
Copper	1.0 mg/L
Corrosivity	noncorrosive
Fluoride	2.0 mg/L
Foaming Agents	0.5 mg/L
Iron	0.3 mg/L
Manganese	0.05 mg/L
Odor	3 threshold odor number
pH	6.5-8.5
Silver	0.10 mg/L
Sulfate	250 mg/L
Total Dissolved Solids	500 mg/L
Zinc	5 mg/L

Table 2

Notes

[1] Maximum Contaminant Level Goal (MCLG) - The maximum level of a contaminant in drinking water at which no known or anticipated adverse effect on the health effect of persons would occur, and which allows for an adequate margin of safety. MCLGs are non-enforceable public health goals.

[2] Maximum Contaminant Level (MCL) - The maximum permissible level of a contaminant in water which is delivered to any user of a public water system. MCLs are enforceable standards. The margins of safety in MCLGs ensure that exceeding the MCL slightly does not pose significant risk to public health.

[3] Treatment Technique - An enforceable procedure or level of technical performance which public water systems must follow to ensure control of a contaminant.

[4] Units are in milligrams per Liter (mg/L) unless otherwise noted.

[5] MCLGs were not established before the 1986 Amendments to the Safe Drinking Water Act. Therefore, there is no MCLG for this contaminant.

[6] Lead and copper are regulated in a Treatment Technique which requires systems to take tap water samples at sites with lead pipes or copper pipes that have lead solder and/or are served by lead service lines. The action level, which triggers water systems into taking treatment steps if exceeded in more than 10% of tap water samples, for copper is 1.3 mg/L, and for lead is 0.015mg/L.

[7] Each water system must certify, in writing, to the state (using third-party or manufacturer's certification) that when acrylamide and epichlorohydrin are used in drinking water systems, the combination (or product) of dose and monomer level does not exceed the levels specified, as follows:

- **Acrylamide** = 0.05% dosed at 1 mg/L (or equivalent)
- **Epichlorohydrin** = 0.01% dosed at 20 mg/L (or equivalent)

[8] The Surface Water Treatment Rule requires systems using surface water or ground water under the direct influence of surface water to (1) disinfect their water, and (2) filter their water to meet criteria for avoiding filtration so that the following contaminants are controlled at the following levels:

- *Giardia lamblia:* 99.9% killed/inactivated
  Viruses: 99.99% killed/inactivated
- *Legionella:* No limit, but EPA believes that if *Giardia* and viruses are inactivated, *Legionella* will also be controlled.
- **Turbidity**: At no time can turbidity (cloudiness of water) go above 5 nephelolometric turbidity units (NTU); systems that filter must ensure that the turbidity go no higher than 1 NTU (0.5 NTU for conventional or direct filtration) in at least 95% of the daily samples for any two consecutive months.
- **HPC**: NO more than 500 bacterial colonies per milliliter.

[9] No more than 5.0% samples total coliform-positive in a month. (For water systems that collect fewer than 40 routine samples per month, no more than one sample can be total coliform-positive). Every sample that has total coliforms must be analyzed for fecal coliforms. There cannot be any fecal coliforms.

[10] Fecal coliform and *E. coli* are bacteria whose presence indicates that the water may be contaminated witih human animal wastes. Microbes in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms.

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- Back to Drinking Water Standards Program

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REFERENCE 27

Hydrogeology of the Brunswick (Passaic) Formation and Implications for Ground Water Monitoring Practice

by Andrew Michalski

Abstract

Fractured shales of the Brunswick Formation provide a major aquifer in the most industrialized region of New Jersey. Numerous cases of ground water contamination have been documented in this formation. However, effectiveness of monitoring and remediation efforts is often hampered by the use of inappropriate concepts regarding ground water flow controls in this complex aquifer system. One such concept presumes that near-vertical fractures parallel to the strike of beds provide principal passages for the flow and produce an anisotropic response to pumping stress. Field evidence presented in this paper confirms that the Brunswick Formation hosts a gently dipping, multiunit, leaky aquifer system that consists of thin water-bearing units and thick intervening aquitards. The water-bearing units are associated with major bedding partings and/or intensely fractured seams. Layered heterogeneity of such a dipping multiunit aquifer system produces an anisotropic flow pattern with preferential flow along the strike of beds. Within the weathered zone, the permeability of the water-bearing units can be greatly reduced. The commonly used hydrogeologic model of the Brunswick as a one-aquifer system, sometimes with vaguely defined "shallow" and "deep" zones, often leads to the development of inadvertent cross-flows within monitoring wells. If undetected, cross-flows may promote contaminant spread into deeper units and impair the quality of hydrogeologic data. Hydrogeologic characterization of the Brunswick shales at any given site should be aimed primarily at identification of the major water-bearing and aquitard units. Recommended techniques for this characterization include fluid logging and other in-well tests.

Introduction

The Brunswick Formation is the thickest (about 10,000 feet) unit of the Newark Group (Kummel 1897) that crops out over a region stretching from southern New York state through northern and central New Jersey into eastern Pennsylvania (Figure 1). Throughout most of its outcrop, the Brunswick Formation provides a principal source of ground water. Numerous domestic, industrial, and municipal wells tap the formation with pumping rates ranging from a few to several hundred gallons per minute. In recent years, many of the water supply wells completed in highly industrialized and urbanized outcrop areas have been found to be contaminated and taken out of service. In the last decade, a dramatic increase in the number of monitoring wells installed in the Brunswick Formation has been observed.

The water-supply aspect of the Brunswick hydrogeology has been dealt with in a number of county-wide reports, which emphasize mostly statistical data on various types of water-supply wells. The issues of ground water distribution, movement, and potential contaminant migration pathways (which are important for proper design of ground water monitoring systems) have received little attention. Moreover, there appears to be a good deal of confusion on these issues in the published literature, which has occasionally led to improper monitoring practices.

Based on a review of the literature and field data from several sites in New Jersey, this paper attempts to reconcile often disparate concepts of ground water occurrence and flow in the Brunswick Formation. A more realistic conceptual flow model is proposed for the formation, together with guidelines for monitoring practices. Though this paper deals only with the Brunswick, much of its content may apply to other bedrock formations of the Newark Basin.

Concepts of Ground Water Occurrence and Movement in the Brunswick Formation

The Brunswick Formation consists of non-marine reddish-brown mudstone, shale, siltstone, and sandstone, which are interbedded with conglomeratic sandstones along basin margins. Three major basalt flows and diabase intrusions are present within a sequence of lenticular strata, which generally strike NE-SW and dip NW at 5 to 25 degrees (Figure 1). Locally, the strata are gently warped and broken by a few large faults and many small ones. Olsen (1980) named the thicker, Triassic (pre-basalt) portion of the Brunswick as the Passaic

p.1

Formation and further subdivided its post-basalt, Jurassic portion. Although the sites indicated in Figure 1 are located within the Passaic Formation, the older stratigraphic term is retained in this paper because terms like the Brunswick or Triassic "Aquifer" have an established use in the hydrogeologic literature.

Systematic fractures, both near-vertical joints and partings along the bedding, are generally believed to provide the principal passages for ground water flow through the Brunswick Formation. Even in conglomeratic lithofacies developed at the basin margins, the fracture permeability appears to dominate the bulk of formation permeability, despite sandstone matrix porosity values of up to 20 percent (Perlmutter 1959).

Ground water in the formation is said to occur under both water table and confined conditions. Rima (1955) identified the "unconfined" zone in the Lansdale (Pennsylvania) area, based on electric logs and flowmeter logs obtained while injecting water into selected wells. The low resistivity combined with a small but continuous decline in flow of injected water with depth was interpreted as indicative of higher water storage and lower permeability of this zone associated with weathered shales.

According to Rima (1955), the unconfined zone occurs to a maximum depth of about 250 feet, below which one or more artesian or semiartesian aquifers occurs to a maximum depth of about 600 feet. Where the bedrock is mantled by low-permeability drift or alluvium, a confined condition may exist at shallow depth in lowland bedrock areas (Gill and Vecchioli 1965, Nichols 1968, Nemickas 1969).

The notion of a multizone aquifer system within the Brunswick has generally been accepted by other researchers (e.g., Barksdale et al. 1958, Perlmutter 1959, Carswell 1976, Houghton 1986). Although the reported thickness of individual water-bearing zones has varied, it was considered rather small. Rima (1955) and Barksdale et al. (1958) estimated the thickness as generally less than 20 feet, while much smaller values (from a few inches to a few feet, with the average about 2 feet) were given by Longwill and Wood (1965) for beds in which secondary openings are well developed.

Differences in permeability between the layers, resulting either from variation in fracturing, weathering, or a combination of both, have been argued (Nichols 1968, Nemickas 1969) to account for the presence of the many water-bearing units and for substantial head differences often measured between the units (Perlmutter 1959, Carswell 1976). Because their relation to lithology is not clear, and strata are commonly lenticular, the individual water-bearing units have been difficult to define and to correlate. This has often led to a haphazard development of ground water supplies (e.g., Carswell 1976) and improper installation of monitoring systems (e.g., case described by Stothoff, 1990).

The directional, anisotropic response to pumping stresses is a well-documented feature of the Brunswick Formation in the region. In most cases, observation wells aligned along the strike of the formation react faster

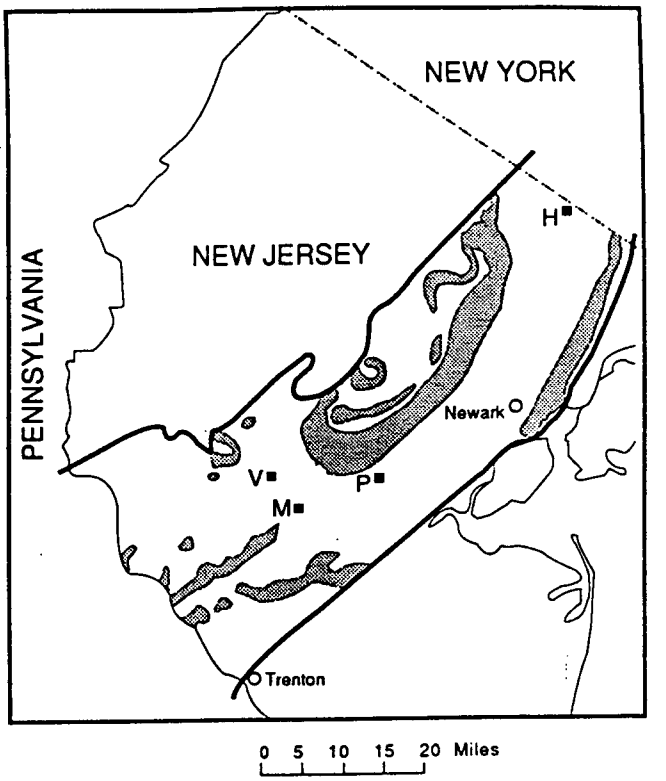

Figure 1. Map showing outcrop area of the Newark Group in New Jersey (between the heavy lines), igneous rocks (shaded areas), and locations of sites referenced in the text.

and show much greater drawdown than observation wells situated perpendicular to the strike (Herpers and Barksdale 1968, Vecchioli et al. 1969). However, some confusion exists as to possible causes of the observed anisotropic response of the formation. Is this behavior caused by an alignment of the principal set of near-vertical fractures subparallel to the strike? Is it that the observed anisotropic response is due to the fact that wells located perpendicular to the strike of a dipping set of heterogeneous strata may penetrate different aquifer zones than the pumped well? Or is it some combination of both causes?

The first concept can be traced back to a paper by Herpers and Barksdale (1951) which discussed results of a pumping test in Newark, New Jersey. The authors argued that, with increasing depth, the weight of overlying materials would tend to close near-horizontal bedding fractures which tend to distribute water uniformly in all directions, while the near-vertical fractures would be less affected at depth, accentuating the tendency of water to flow in the direction of prevailing vertical cracks along the strike. They envisioned that individual vertical fractures might transmit water for distances of up to 2 or 3 miles without interruption, and that locally the fractures would extend to the top of bedrock, providing the hydraulic contact to the ground surface.

The concept that anisotropic behavior of the Brunswick strata is controlled by the alignment of vertical fractures along the strike of strata has been echoed in many later publications and reports (e.g., Vecchioli 1967, Nichols 1968, Spayd 1985).

On the other hand, there have been reports of sub-

stantial permeability variations in vertical profiles of wells, occurrences of discrete productive zones in association with bedding, and internal flows in wells in Pennsylvania (Rima 1955, Longwill and Wood 1965), southern New York state (Perlmutter 1959), and in New Jersey. At a site near Trenton, Vecchioli et al. (1969) documented the occurrence of ground water mainly in discrete zones controlled by bedding. The effect of tapping different producing zones on drawdowns measured during pumping was also evident at that site. Carswell (1976) characterized the ground water system in the Brunswick of northern New Jersey as consisting of a series of alternating tabular aquifers and aquicludes several tens of feet thick, which extended downdip for a few hundred feet and were continuous for thousands of feet along strike.

Field Evidence

Internal Aquifer Structure

Although any combination of the two presented concepts on control of fracture flow in the Brunswick shales can be envisioned, this author's data from a number of sites fit the latter concept. A conceptual model of the Brunswick Formation proposed herein embodies a "leaky," multiunit aquifer system, which consists of thin water-bearing units and much thicker, strata-bound, intervening aquitards. Both the water-bearing units and the aquitards are part of a homoclinal structure with a typical dip in the range of 5° to 25°. On the whole, such a structure is inherently anisotropic with the least permeability axis oriented perpendicular to bedding. The structure is capped by a weathered zone of lower permeability.

Figure 2 provides an example of the internal structure of the Brunswick Aquifer system at Site "P," where the formation is made up predominantly of mudstones. Three major discrete water-bearing units (designated on Figure 2 with letters A, B, and C) have been distinguished based on observations made during well drilling, temperature and electrical conductivity logging, in-well flow tracing, and slug testing. These major water-bearing units as well as several minor units are thin and separated by much thicker aquitards. In the construction of the cross section in Figure 2, information from some wells was projected over distances of several hundred feet (See map in Figure 2).

Despite such a distant projection, a consistent arrangement of the units parallel to the bedding is evident, implying a significant lateral extent for these major water-bearing units at Site P.

Ground water flow appears to be primarily influenced by partings along bedding and by the contrast in degree of fracturing.

Regarding their nature, the discrete water-bearing units in Figure 2 may represent larger bedding plane partings or seams of densely fractured rocks. The bedding partings provide a special class of fracture passages, not only because of their different origin, but also due to their consistent orientation and greater extent than any other fracture type. The greater extent of bedding discontinuities also tends to reinforce the effect of permeability anisotropy resulting from variations in fracturing and permeability between individual beds.

An earlier belief that bedding partings in the Brunswick play a minor hydraulic role because of their closure under increased vertical stress with depth (Herpers and Barksdale 1951) needs to be revised. The in situ stress distribution is often more complex than predicted from a simple model of gravitational stresses. The vertical stress at shallow depth may be less than horizontal stresses due to stress release in overconsolidated and partially eroded formations such as the Brunswick. Consequently, some bedding partings may become more open than vertical fractures. Besides, the flow within a bedding fissure should be visualized as occurring through channels meandering in between asperities that transmit load across the fissure walls.

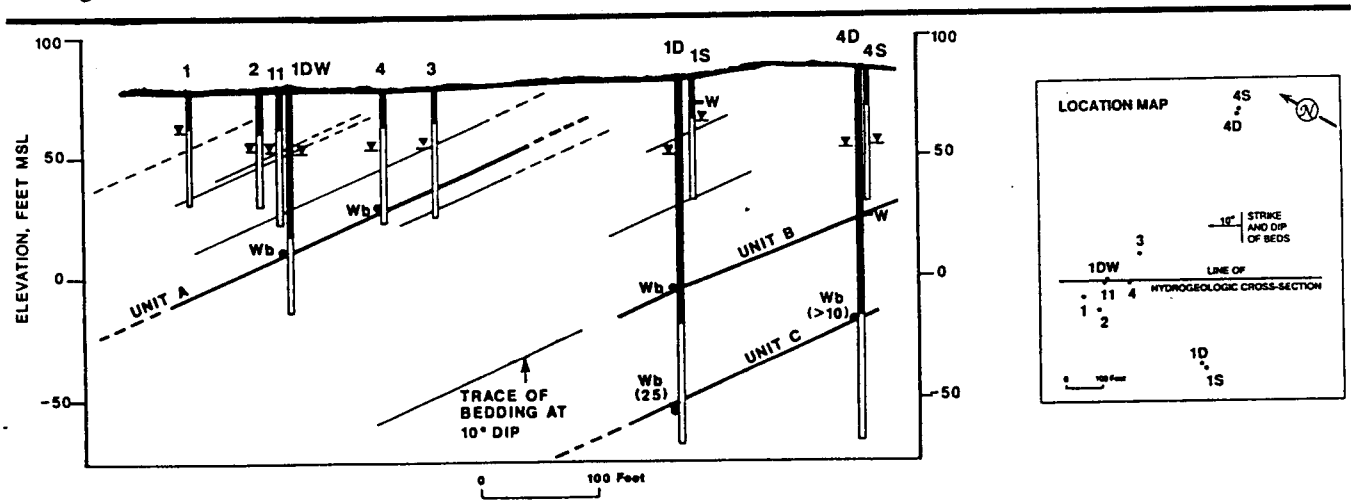

Figure 2. Hydrogeologic cross section and location map for Site P. Letter W at well bores indicates depth at which water was encountered during drilling by air-rotary method, Wb indicates water flowing from the hole, and number in parentheses gives flow-rate in gallons per minute.

p.3

Michalski and Klepp (1990) documented a case in northern New Jersey in which substantial flows occurred through discrete bedding partings in a sequence of predominantly thick sandstone beds of the Brunswick Formation. This site is designated as Site H on Figure 1. The significant role of bedding planes in controlling ground water flow is reported from other sedimentary basins (e.g., Trainer 1968).

Contrast in bed fracturing within the vertical profile of strata is the other major factor capable of producing discrete aquifer zones. Trends governing differential fracturing of beds need to be discussed. It has been known from fracture measurements in other sedimentary basins (e.g., Harris et al. 1960) and from theoretical considerations (Price 1966) that the frequency of systematic fractures/joints within individual units of a heterogeneous sequence is mostly controlled by the lithology ("competence") of each unit, its thickness, and the degree of tectonic deformation experienced by the sequence. A more competent bed tends to exhibit lower fracture frequency than a less competent one. For a given lithology and local tectonic history, the frequency should be inversely proportional to bed thickness (Price 1966).

as long as has competent unit has deformed brittly

Based on these rules, one can expect that thicker units of stiffer and stronger beds will exhibit fewer fractures than intervening thin beds of weaker lithologic types. In the case of the Brunswick sequence shown in Photo 1, fewer vertical fractures can be seen in thicker and more resistant mudstone beds than in shale seams. Conceivably, in such a sequence, the massive mudstone would act as an aquitard while the shale seams could furnish the production or water-bearing zones. The cyclic character of deposition of the Triassic formations (Van Houten 1969) has resulted in multiple repetitions of similar sequences at consistent intervals. The occurrence of multiple aquifer/aquitard sequences can thus be anticipated in these formations.

In addition to the most numerous, strata-bound fractures (to which the earlier discussion applies), several widely spaced, near-vertical fractures run across the sequence (Photo 1). These pervasive fractures impart a leaky character to the entire sequence. Due to the large apertures commonly found in these fractures, considerable leakage may be sustained at favorable in situ stress conditions in the absence of fracture infillings.

Distributions of Hydraulic Heads and Permeability

Apparent irregularities of the potentiometric surface are common at many monitored sites in the region. Water-level elevations in wells 1 and 1S on Figure 2 provide examples of such apparent anomalies; elevations observed in these wells are substantially higher than water-level elevations in nearby wells of similar

Photo 1. Fragment of exposure of partially weathered Brunswick Formation at Route 18 in New Brunswick, New Jersey. A thick mud-stone bed (indicated by the hammer and light color) shows few fractures, while intervening shales are densely fractured and water-bearing (dark color).

distribution of hydraulic heads – ① position of open well interval with respect to structure (various water-bearing zones) ② topography (recharge/discharge area) ③ weathering related permeability changes with depth.

depth. In this particular case, the differences appear to result from positioning of open well intervals within different units of the formation. Wells 1 and 1S are open into aquitard units while other wells intersect intervening water-bearing units. Significant head differences can exist between individual units. Unless the structure of a multiunit aquifer is defined and the position of open well intervals with respect to the structure is accounted for, erroneous conclusions may be drawn from water-level data regarding the ground water flow direction and hydraulic gradients. (*)

Wells in which significant cross-flows occur should be considered to be improperly installed.

Figure 3 shows a composite plot of depths to static water level vs. depth of wells for a total of 37 wells from three sites in the Brunswick Formation. A trend of an increasing depth to water level with increasing well depths is evident at sites M and V. This trend indicates the presence of strong downward gradients at both sites, which is a typical feature of recharge zones. The topography of sites M and V implies the occurrence of a recharging regime in the local shallow flow systems. The trend is not seen in wells installed at Site P, but a gentle topographic slope across the site and its position with respect to the nearest streams suggest that the site may be situated in a transition zone between recharging and discharging flow regimes.

In addition to the structure and topography, the observed distribution of hydraulic heads is largely influenced by weathering-related permeability changes with depth. In general, the weathering processes in shales result in the reduction of the primary fracture permeability by clogging the more conductive fractures with clay. The changes appear to be superimposed on the permeability variation inherent in the structure of multiunit bedrock aquifer system.

Figure 4 presents trends in distribution of the bulk hydraulic conductivity values (obtained from routine slug tests) vs. depth of open intervals in monitoring wells at two sites. The values obtained range over four orders of magnitude, from 10^{-6} to 10^{-2} cm/s. The lowest hydraulic conductivity values came from shallow wells that were completed within aquitard units, and higher values for shallow wells were associated with wells intersecting near-surface reaches of identified major water-bearing units (Figure 2). Wells open below a depth of 50 to 60 feet appear to intercept a transition from an intensely weathered shallow zone to an unweathered zone. Deep monitoring wells provided higher values of the bulk hydraulic conductivity and a lower variability of this parameter (Figure 4B).

Although weathering tends to reduce the permeability, numerous secondary fractures formed in the process

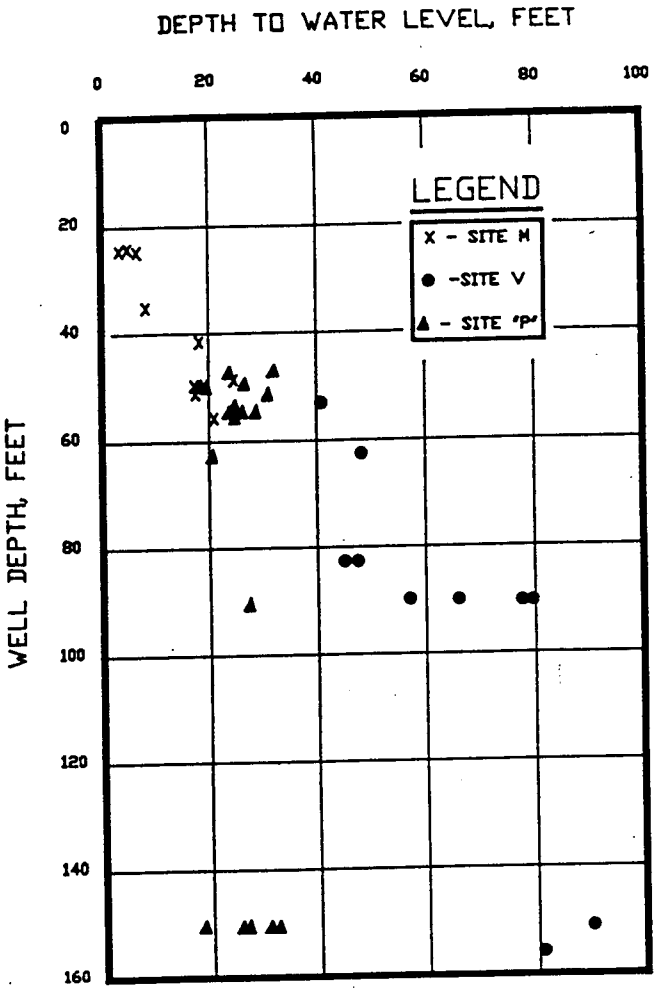

Figure 3. Relation of depth to water level with well depth for 37 monitoring wells at three sites in the Brunswick Formation.

may augment the storage potential of the weathered zone. As a result, pockets of perched water often form within and above the zone.

Preferential Flow in Undisturbed Aquifer System

The occurrence of a stratigraphy-controlled, multiunit aquifer system within the dipping bed setting tends to produce an anisotropic pattern of ground water flow.

In the saturated zone, primary flow is generally restricted to bedding fissures and fractured beds along strike. Usually, only minor deflections from that direction are attributable to the topography, flow boundaries and transient effects. However, the vertical flows may prevail across aquitards separating the aquifer units and in the weathered zone. These general principles can be useful in assessing the contaminant migration pathways within the Brunswick Formation provided that major aquifer and aquitard units beneath a site are located and sufficiently characterized.

Suggested Monitoring Practice

Contaminant investigations at sites located above the Brunswick Formation commonly involve installation of two sets of monitoring wells. The sets are usually referred to as the shallow and the deep wells, and are intended to monitor vaguely defined "shallow" and "deep" zones of the aquifer system.

p.5

The shallow wells are usually installed to span the first water-bearing zone noticed during installation of these wells. Completion depth of deep monitoring wells is sometimes determined by a typical depth of water-supply wells in the area. In other cases, the deep wells are drilled to an arbitrarily pre-selected depth (such as 100 or 150 feet). There is a tendency to complete all monitoring wells of a given set to a similar depth. Usually, the monitoring wells are 6-inch holes with open interval length ranging between 20 feet and several hundred feet.

The observed distribution of hydraulic heads is largely influenced by permeability changes.

Installation of 6-inch diameter wells in low-permeability portions of the Brunswick Formation can lead to significant errors in head measurements, which stems from large well storage and time lags in response to water-level changes in wells of larger diameters (Freeze and Cherry 1979). Time lags of up to two weeks were observed in some wells open to aquitard units and the weathered zone, while in wells open to major water-bearing zones the observed time lags were very short. Where permeability values obtained from wells at a site differ by four orders of magnitude (as depicted in Figure 4B), the variability of the response time among wells is yet another factor complicating interpretations of water-level measurements and pump-test data. Because the time lag is directly proportional to the square of the well radius, the use of smaller diameter holes is recommended for monitoring wells in the weathered zone.

The practice of well installation to an arbitrary target depth and of treating the Brunswick Formation as if it were one aquifer (or a two-zone aquifer) may be convenient for the design of ground water monitoring systems and for logistics of well drilling. However, the lack of consideration of the not-so-apparent internal structure of the aquifer system and of the 3-D nature of transport can bring about inadvertent detrimental side effects.

Of most concern is the chance of triggering cross-flows within open segments of wells caused by inadvertent bridging of aquifer units with different heads and/or transmissivities. Because of the trend of increasing hydraulic conductivity with depth of weathered zone (Figure 4), the chance of cross-flows is high for wells with longer intervals open across this zone, particularly for sites in recharge areas. If present, such cross-flows may affect or alter a pre-existing pattern of ground water flow, possibly inducing contaminant migration through the well into deeper bedrock units (e.g., Michalski and Klepp 1990). The potentiometric and chemical data obtained under such circumstances would be ambiguous, misguiding the development of remedial measures.

Wells in which significant cross-flows occur should

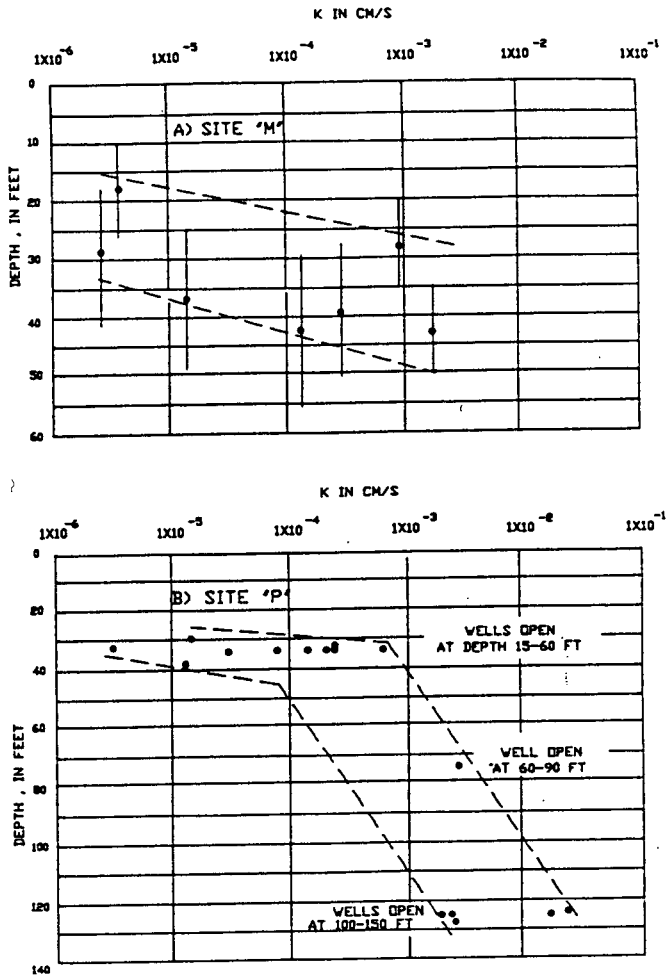

Figure 4. Distribution of vertically averaged hydraulic conductivity values vs. depth of open intervals of monitoring wells at sites M and P. Mid-points of open intervals are denoted by points, and vertical segments on the upper plot (Site M) represent the intervals.

be considered improperly installed monitoring wells. The use of short open intervals (generally less than 20 feet) helps to reduce the possibility of creating cross-flows. On the other hand, the placement of wells with shorter open intervals is not an easy task in situations in which a thick and apparently monotonous formation provides few clues on the location of potentially important water-bearing and aquitard units. Therefore, a trial-and-error approach to well placement in the Brunswick may be justified if inadvertent placement errors are rectified in a timely manner.

To this end, there is a need to employ investigation techniques capable of locating major aquifer units and detecting internal leaks in wells. These techniques are outlined in following text. If a significant leak is detected in an existing well, such a well should be retrofitted to stop the leak. At new sites, pilot test wells may be drilled first, tested for internal leaks, and then retrofitted if needed. Retrofitting can be accomplished either by grouting a length of open interval from the well bottom, or by equipping the well with a permanent multipacker monitoring system. Cherry and Johnson (1982) and Black et al. (1987) provided descriptions of such multilevel systems. From the cost-effectiveness standpoint, the use of commercially available devices for multilevel

p.6

TABLE 1
Advantages and Limitations of Hydrogeologic Characterization Techniques Applicable to the Brunswick Formation

Technique	Information sought, advantages, and limitations
Surface Techniques	
Hydrogeologic Mapping	Bedrock lithology and structure, soil types, hydrologic features and flow boundaries. Less effective in the presence of thick soil mantle.
Test Pits/ Trenches	Thickness and character of soil/weathered zone, lithology, dip and strike of bedrock, orientation, spacing and character of fracture systems, presence of shallow water zones. Can be combined with soil sampling and the use of contaminant-sensing devices. Experienced geologist needed to obtain quality data.
Drilling Techniques	
Drilling/Logging and Well Installation	Air-rotary is preferred drilling method. Lithologic variations determined from cuttings and drilling rates ("hard" and "soft" zones). Position of major producing zones can be ascertained, and inflows associated with each zone can be estimated/measured. Wet zones above the standing water level can also be located.
Coring	Lithology and fracture characteristics can be evaluated, and formation samples can be taken for lab analysis. Some fractures can be induced by drilling. Generally expensive. Core recovery and quality dependent on geology and drillers performance, usually poor in fracture zones.
Intra-Well Techniques	
Downhole Video Survey	Fracture traces, apertures, and frequency, lithologic contacts, borehole wall profile, water seeps from fractures above the standing water level can be viewed in an open-hole TV survey. Watertightness of casing joints and grouting can be ascertained. Requires clean well water. (Acoustic televiewer was developed for mud-filled wells).
Temperature and Electrical Conductivity Logging	Locations of major transmissive fractures, possible vertical flows in a well, and water quality can be inferred from inflections of the logs. Qualitative. Inexpensive downhole probes are available and the logging is fast.
Other Geophysical Logs	Caliper, natural gamma, SP, and electric logs may provide information on lithology and in situ water quality. Specialized logging (such as acoustic wave form logging to infer fracture permeability) is still experimental.
Flowmeters	Velocity and vertical flows (either spontaneous or induced by pumping) within a well can be measured. Impeller-type meters stall at velocities less than 5 ft/min. More sensitive thermal flowmeters are not readily available.
In-Well Flow Tracing	Locations of transmissive fractures or fracture zones, occurrences of internal flows in wells, and relative hydraulic heads between the fractures or zones can be determined by repeated logging of electrical conductivity following an injection of a small-volume saline slug. Inexpensive and sensitive for slow flow velocities. Density effects may need to be considered.
Slug Testing	Vertically averaged hydraulic conductivity value (K) for the tested well segment can be obtained. Variability of (K) over the study area is quantified if tests are performed in many monitoring wells. Limited to settings with low and moderate permeability.

p.7

TABLE 1 (continued)
Advantages and Limitations of Hydrogeologic Characterization Techniques Applicable to the Brunswick Formation

Technique	Information sought, advantages, and limitations
Straddle Packer Testing	Injectivity/hydraulic conductivity for packed-off intervals, and conductivity profiles with depth. Test intervals are usually larger (at least 5 feet) than individual fracture zones.
Inter-Well Techniques	
Water Level/Potentiometric Surface Mapping	Distribution of heads, apparent flow direction and hydraulic gradient are usually determined from water-level measurements in monitoring wells. In multiunit aquifers, validity of such determinations depends on penetration of various units by individual wells. Apparent potentiometric anomalies can provide valuable information on the aquifer system.
Pumping Tests, Pulse Interference Tests	Typical objectives of these tests include determination of the degree of hydraulic connection between monitoring wells and aquifer/aquitard zones they penetrate, determination of apparent hydraulic parameters of the aquifer system or individual fracture zones, and demonstration of hydraulic control over a contaminated area.
Tracer Tests	Inter-well tracing under natural gradient is generally not feasible, but contaminants themselves can be viewed as tracers. Forced-gradient tracer tests can be performed in several configurations.

monitoring can be justified for larger projects.

Table 1 provides a survey of techniques of hydrogeologic characterization that may be used for the Brunswick Formation (and for similar settings with fracture-dominated permeability). For application in routine contamination investigations, only a few of these techniques are of interest.

Surface techniques, such as hydrogeologic mapping and test pits/trenches (Table 1), can be of considerable value in preliminary investigations. Because ground water occurrence and flow in the Brunswick are known to be strongly influenced by a homoclinal dip, lithologic variations, weathering, and hydrologic boundaries, knowledge of these characteristics at an early stage would aid in selecting locations for and placement of open intervals of monitoring wells. Air-rotary drilling is preferred as a well installation method, because it allows for observations and tentative identifications of major water-bearing zones. Downhole video surveys may offer a less expensive and often better alternative to coring.

In-well techniques, particularly those aimed at determination of intra-well fluid flow, are important tools for checking proper completion of individual monitoring wells, and for aiding in hydrogeologic characterization of the entire aquifer system. Temperature and electrical conductivity logging, flowmeter tests, and in-well flow tracing are included in this category (Table 1). These techniques are described by Keys (1989). The use of readily available electrical conductivity probes to track the movement and dilution of a small-volume saline slug injected into well makes a valuable and inexpensive testing method for monitoring wells installed in the Brunswick Formation (Carswell 1976, Michalski 1989, Michalski and Klepp 1990). Because of interpretation problems, routine pumping test analyses (Table 1) can be inadequate or misleading without a prior understanding of placement of the open intervals of pumping and observation wells with respect to the structure of a multiunit aquifer.

Conclusions

1. Ground water flow in the Brunswick Formation appears to be influenced primarily by partings along bedding and by the contrast in degree of fracturing between beds. A lingering belief that near-vertical fractures oriented parallel to the strike of beds dominate the flow is not supported by field data.
2. On a scale typical of most ground water contamination studies, the Brunswick Formation hosts a multiunit, leaky ground water system in which individual water-bearing units are relatively thin and parallel to the bedding. A large-scale anisotropic flow pattern results from inherent heterogeneity of the multiunit system. Along-strike flow direction is favored within the saturated reaches of individual water-bearing units, and vertical flow across intervening aquitards is produced by head differences in the water-bearing units.
3. Weathering of shales has further complicated the system by reducing the permeability of water-bearing units within the weathered zone and by increasing storage of the zone. Strong vertical gradients can

p.8

develop across the weathered zone, particularly in recharge areas. This promotes the downward flow and contaminant migration through wells open across the zone and/or leaks developed behind casing. Special attention should be given to installation and testing of monitoring wells that intersect the weathered zone near known sources of contamination.

Differences in permeability have been argued to account for the substantial head differences.

4. Current practice of treating the Brunswick Formation as a one-aquifer system, sometimes with vaguely defined "shallow" and "deep" zones, often leads to the development of inadvertent cross-flows in monitoring wells. Undetected cross-flow may promote the spread of contamination through the wells, seriously impair the quality of hydrogeologic data obtained, and misguide the development of remedial measures.
5. Initial hydrogeologic characterization of the Brunswick Formation should be aimed at identification of the major water-bearing and aquitard units making up the aquifer system at a site. Fluid-movement measurements in existing wells or pilot holes, and other in-well testing techniques are feasible tools for such characterization.
6. In general, open intervals in monitoring wells should not exceed about 20 feet for the water-bearing units. Installation of wells open entirely to aquitard units should be avoided. The use of small-diameter holes is recommended for monitoring wells open to the weathered zone. For larger projects, the use of a multiple-packer monitoring system may offer a viable alternative to open holes.

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Biographical Sketch

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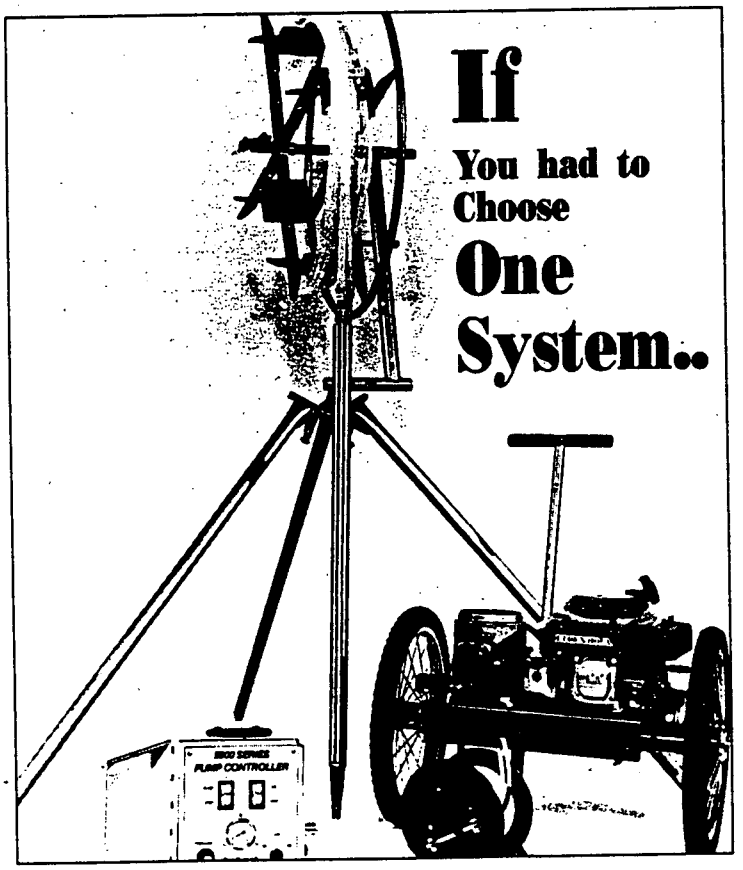

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p.1

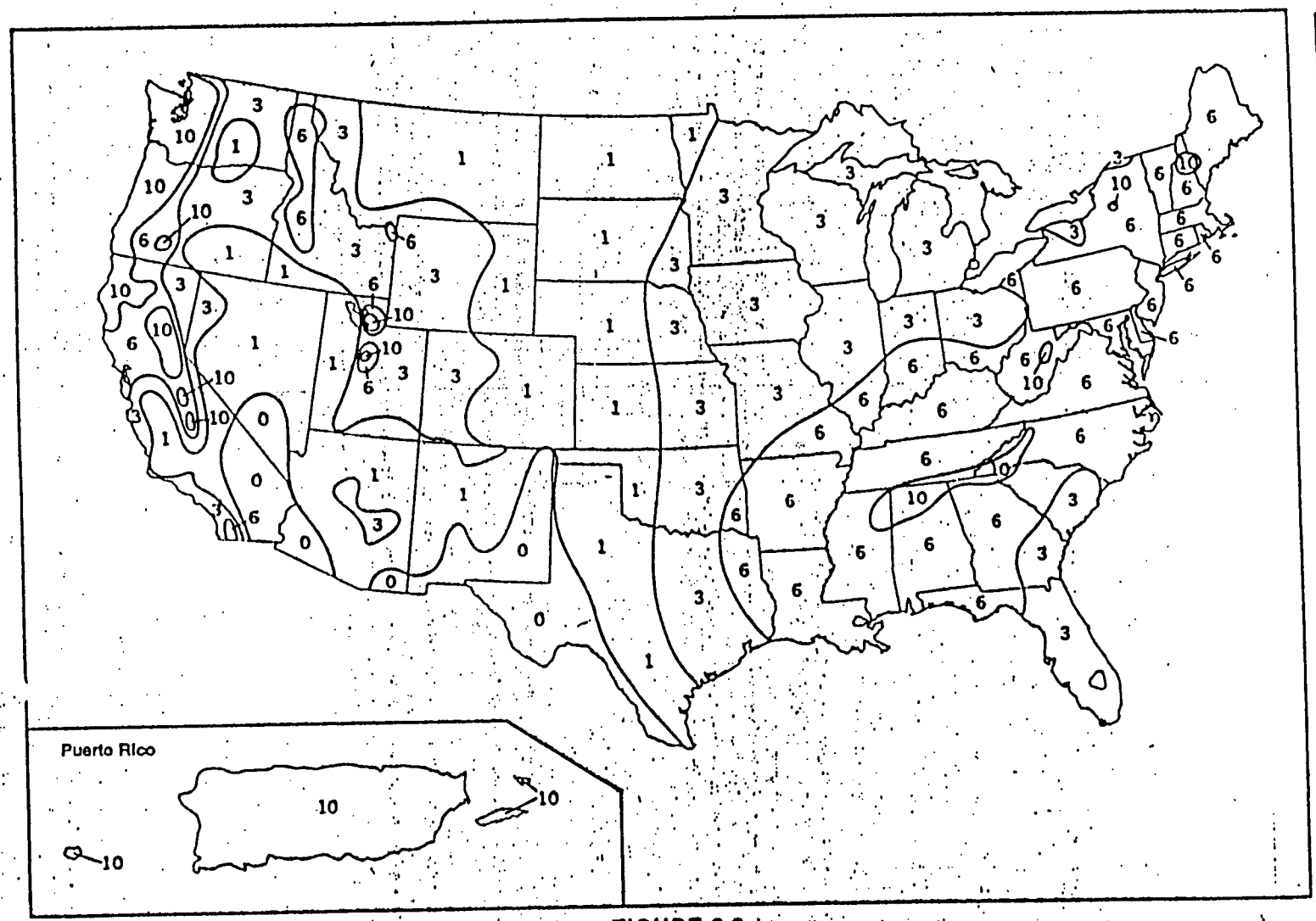

FIGURE 3-2
NET PRECIPITATION FACTOR VALUES

P.2

–When measured monthly evapotranspiration is not available, calculate monthly potential evapotranspiration (E_i) as follows:

$$E_i = 0.6\, F_i\, (10\, T_i/I)^a$$

where:

E_i=Monthly potential evapotranspiration (inches) for month i.

F_i=Monthly latitude adjusting value for month i.

T_i=Mean monthly temperature (°C) for month i.

$$I = \sum_{i=1}^{12} (T_i/5)^{1.514}$$

$$a = 6.75\times10^{-7} I^3 - 7.71\times10^{-5} I^2 + 1.79\times10^{-2} I + 0.49239$$

Select the latitude adjusting value for each month from Table 3–3. For latitudes lower than 50° North or 20° South, determine the monthly latitude adjusting value by interpolation.

• Calculate monthly net precipitation by subtracting monthly evapotranspiration (or monthly potential evapotranspiration) from monthly precipitation. If evapotranspiration (or potential evapotranspiration) exceeds precipitation for a month, assign that month a net precipitation value of 0.

• Calculate the annual net precipitation by summing the monthly net precipitation values.

• Based on the annual net precipitation, assign a net precipitation factor value from Table 3–4.

Enter the value assigned from Figure 3–2 or from Table 3–4, as appropriate, in Table 3–1.

TABLE 3–3.—MONTHLY LATITUDE ADJUSTING VALUES[a]

Latitude[b] (degrees)	Month											
	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.
≥50 N	0.74	0.78	1.02	1.15	1.33	1.36	1.37	1.25	1.06	0.92	0.76	0.70
45 N	0.80	0.81	1.02	1.13	1.28	1.29	1.31	1.21	1.04	0.94	0.79	0.75
40 N	0.84	0.83	1.03	1.11	1.24	1.25	1.27	1.18	1.04	0.96	0.83	0.81
35 N	0.87	0.85	1.03	1.09	1.21	1.21	1.23	1.16	1.03	0.97	0.89	0.85
30 N	0.90	0.87	1.03	1.08	1.18	1.17	1.20	1.14	1.03	0.98	0.89	0.88
20 N	0.95	0.90	1.03	1.05	1.13	1.11	1.14	1.11	1.02	1.00	0.93	0.94
10 N	1.00	0.91	1.03	1.03	1.08	1.06	1.08	1.07	1.02	1.02	0.98	0.99
0	1.04	0.94	1.04	1.01	1.04	1.01	1.04	1.04	1.01	1.04	1.01	1.04
10 S	1.08	0.97	1.05	0.99	1.00	0.96	1.00	1.02	1.00	1.06	1.05	1.09
20 S	1.14	0.99	1.05	0.97	0.96	0.91	0.95	0.99	1.00	1.08	1.09	1.15

[a] Do not round to nearest integer.
[b] For unlisted latitudes lower than 50° North or 20° South, determine the latitude adjusting value by interpolation.

TABLE 3–4.—NET PRECIPITATION FACTOR VALUES

Net precipitation (inches)	Assigned value
0	0
Greater than 0 to 5	1
Greater than 5 to 15	3
Greater than 15 to 30	6
Greater than 30	10

3.1.2.3 *Depth to aquifer.* Evaluate depth to aquifer by determining the depth from the lowest known point of hazardous substances at a site to the top of the aquifer being evaluated, considering all layers in that interval. Measure the depth to an aquifer as the distance from the surface to the top of the aquifer minus the distance from the surface to the lowest known point of hazardous substances eligible to be evaluated for that aquifer. In evaluating depth to aquifer in karst terrain, assign a thickness of 0 feet to a karst aquifer that underlies any portion of the sources at the site. Based on the calculated depth, assign a value from Table 3–5 to the depth to aquifer factor.

Determine the depth to aquifer only at locations within 2 miles of the sources at the site, except: if observed ground water contamination attributable to sources at the site extends more than 2 miles beyond these sources, use any location within the limits of this observed ground water contamination when evaluating the depth to aquifer factor for any aquifer that does not have an observed release. If the necessary geologic information is available at multiple locations, calculate the depth to aquifer at each location. Use the location having the smallest depth to assign the factor value. Enter this value in Table 3–1.

TABLE 3–5.—DEPTH TO AQUIFER FACTOR VALUES

Depth to aquifer[a] (feet)	Assigned value
Less than or equal to 25	5
Greater than 25 to 250	3
Greater than 250	1

[a] Use depth of all layers between the hazardous substances and aquifer. Assign a thickness of 0 feet to any karst aquifer that underlies any portion of the sources at the site.

3.1.2.4 *Travel time.* Evaluate the travel time factor based on the geologic materials in the interval between the lowest known point of hazardous substances at the site and the top of the aquifer being evaluated. Assign a value to the travel time factor as follows:

• If the depth to aquifer (see section 3.1.2.3) is 10 feet or less, assign a value of 35.

• If, for the interval being evaluated, all layers that underlie a portion of the sources at the site are karst, assign a value of 35.

• Otherwise:

–Select the lowest hydraulic conductivity layer(s) from within the above interval. Consider only layers at least 3 feet thick. However, do not consider layers or portions of layers within the first 10 feet of the depth to the aquifer.

–Determine hydraulic conductivities for individual layers from Table 3–6 or from in-situ or laboratory tests. Use representative, measured, hydraulic conductivity values whenever available.

–If more than one layer has the same lowest hydraulic conductivity, include all such layers and sum their thicknesses. Assign a thickness of 0 feet to a karst layer that underlies any portion of the sources at the site.

–Assign a value from Table 3–7 to the travel time factor, based on the thickness and hydraulic conductivity of the lowest hydraulic conductivity layer(s).

p. 3

TABLE 3-6.—HYDRAULIC CONDUCTIVITY OF GEOLOGIC MATERIALS

Type of material	Assigned hydraulic conductivity [a] (cm/sec)
Clay; low permeability till (compact unfractured till); shale; unfractured metamorphic and igneous rocks	10^{-6}
Silt; loesses; silty clays; sediments that are predominantly silts; moderately permeable till (fine-grained, unconsolidated till, or compact till with some fractures); low permeability limestones and dolomites (no karst); low permeability sandstone; low permeability fractured igneous and metamorphic rocks	10^{-4}
Sands; sandy silts; sediments that are predominantly sand; highly permeable till (coarse-grained, unconsolidated or compact and highly fractured); peat; moderately permeable limestones and dolomites (no karst); moderately permeable sandstone; moderately permeable fractured igneous and metamorphic rocks	10^{-2}
Gravel; clean sand; highly permeable fractured igneous and metamorphic rocks; permeable basalt; karst limestones and dolomites	10^{-2}

[a] Do not round to nearest integer.

TABLE 3-7.—TRAVEL TIME FACTOR VALUES [a]

Hydraulic conductivity (cm/sec)	Thickness of lowest hydraulic conductivity layer(s)[b] (feet)			
	Greater than 3 to 5	Greater than 5 to 100	Greater than 100 to 500	Greater than 500
Greater than or equal to 10^{-3}	35	35	35	25
Less than 10^{-3} to 10^{-6}	35	25	15	15
Less than 10^{-6} to 10^{-7}	15	15	5	5
Less than 10^{-7}	5	5	1	1

[a] If depth to aquifer is 10 feet or less or if, for the interval being evaluated, all layers that underlie a portion of the sources at the site are karst, assign a value of 35.

[b] Consider only layers at least 3 feet thick. Do not consider layers or portions of layers within the first 10 feet of the depth to the aquifer.

Determine travel time only at locations within 2 miles of the sources at the site, except if observed ground water contamination attributable to sources at the site extends more than 2 miles beyond these sources, use any location within the limits of this observed ground water contamination when evaluating the travel time factor for any aquifer that does not have an observed release. If the necessary subsurface geologic information is available at multiple locations, evaluate the travel time factor at each location. Use the location having the highest travel time factor value to assign the factor value for the aquifer. Enter this value in Table 3-1.

3.1.2.5 *Calculation of potential to release factor value.* Sum the factor values for net precipitation, depth to aquifer, and travel time, and multiply this sum by the factor value for containment. Assign this product as the potential to release factor value for the aquifer. Enter this value in Table 3-1.

3.1.3 *Calculation of likelihood of release factor category value.* If an observed release is established for an aquifer, assign the observed release factor value of 550 as the likelihood of release factor category value for that aquifer. Otherwise, assign the potential to release factor value for that aquifer as the likelihood of release value. Enter the value assigned in Table 3-1.

3.2 *Waste characteristics.* Evaluate the waste characteristics factor category for an aquifer based on two factors: toxicity/mobility and hazardous waste quantity. Evaluate only those hazardous substances available to migrate from the sources at the site to ground water. Such hazardous substances include:

- Hazardous substances that meet the criteria for an observed release to ground water.
- All hazardous substances associated with a source that has a ground water containment factor value greater than 0 (see sections 2.2.2, 2.2.3, and 3.1.2.1).

3.2.1 *Toxicity/mobility.* For each hazardous substance, assign a toxicity factor value, a mobility factor value, and a combined toxicity/mobility factor value as specified in the following sections. Select the toxicity/mobility factor value for the aquifer being evaluated as specified in section 3.2.1.3.

3.2.1.1 *Toxicity.* Assign a toxicity factor value to each hazardous substance as specified in Section 2.4.1.1.

3.2.1.2 *Mobility.* Assign a mobility factor value to each hazardous substance for the aquifer being evaluated as follows:

- For any hazardous substance that meets the criteria for an observed release by chemical analysis to one or more aquifers underlying the sources at the site, regardless of the aquifer being evaluated, assign a mobility factor value of 1.
- For any hazardous substance that does not meet the criteria for an observed release by chemical analysis to at least one of the aquifers, assign that hazardous substance a mobility factor value from Table 3-8 for the aquifer being evaluated, based on its water solubility and distribution coefficient (K_d).
- If the hazardous substance cannot be assigned a mobility factor value because data on its water solubility or distribution coefficient are not available, use other hazardous substances for which information is available in evaluating the pathway.

TABLE 3-8.—GROUND WATER MOBILITY FACTOR VALUES [a]

Water solubility (mg/l)	Distribution coefficient (K_d) (ml/g)			
	Karst [c]	≤ 10	> 10 to 1,000	> 1,000
Present as liquid [b]	1	1	0.01	0.0001
Greater than 100	1	1	0.01	0.0001
Greater than 1 to 100	0.2	0.2	0.002	2×10^{-5}
Greater than 0.01 to 1	0.002	0.002	2×10^{-5}	2×10^{-7}
Less than or equal to 0.01	2×10^{-5}	2×10^{-5}	2×10^{-7}	2×10^{-9}

[a] Do not round to nearest integer.
[b] Use if the hazardous substance is present or deposited as a liquid.
[c] Use if the entire interval from the source to the aquifer being evaluated is karst.

p. 4

Drainage area. Determine the drainage area for the sources at the site. Include in this drainage area both the source areas and the area upgradient of the sources, but exclude any portion of this drainage area for which runoff is diverted from entering the sources by storm sewers or run-on control and/or runoff management systems. Assign a drainage area value for the watershed from Table 4–3.

Soil group. Based on the predominant soil group within the drainage area described above, assign a soil group designation for the watershed from Table 4–4 as follows:

- Select the predominant soil group as that type which comprises the largest total area within the applicable drainage area.
- If a predominant soil group cannot be delineated, select that soil group in the drainage area that yields the highest value for the runoff factor.

Calculation of runoff factor value. Assign a combined rainfall/runoff value for the watershed from Table 4–5, based on the 2-year, 24-hour rainfall and the soil group designation. Determine the runoff factor value for the watershed from Table 4–6, based on the rainfall/runoff and drainage area values. Enter the runoff factor value in Table 4–1.

TABLE 4–3.—DRAINAGE AREA VALUES

Drainage area (acres)	Assigned value
Less than 50	1
50 to 250	2
Greater than 250 to 1,000	3
Greater than 1,000	4

TABLE 4–4.—SOIL GROUP DESIGNATIONS

Surface soil description	Soil group designation
Coarse-textured soils with high infiltration rates (for example, sands, loamy sands).	A
Medium-textured soils with moderate infiltration rates (for example, sandy loams, loams).	B
Moderately fine-textured soils with low infiltration rates (for example, silty loams, silts, sandy clay loams).	C
Fine-textured soils with very low infiltration rates (for example, clays, sandy clays, silty clay loams, clay loams, silty clays); or impermeable surfaces (for example, pavement).	D

TABLE 4–5.—RAINFALL/RUNOFF VALUES

2-Year, 24-hour rainfall (inches)	Soil group designation			
	A	B	C	D
Less than 1.0	0	0	2	3
1.0 to less than 1.5	0	1	2	3
1.5 to less than 2.0	0	2	3	4
2.0 to less than 2.5	1	2	3	4
2.5 to less than 3.0	2	3	4	4
3.0 to less than 3.5	2	3	4	5
3.5 or greater	3	4	5	6

TABLE 4–6.—RUNOFF FACTOR VALUES

Drainage area value	Rainfall/runoff value						
	0	1	2	3	4	5	6
1	0	0	0	1	1	1	1
2	0	0	1	1	2	3	4
3	0	0	1	3	7	11	15
4	0	1	2	7	17	25	25

4.1.2.1.2.1.3 *Distance to surface water.* Evaluate the distance to surface water as the shortest distance, along the overland segment, from any source with a surface water containment factor value greater than 0 to either the mean high water level for tidal waters or the mean water level for other surface waters. Based on this distance, assign a value from Table 4–7 to the distance to surface water factor for the watershed. Enter this value in Table 4–1.

4.1.2.1.2.1.4 *Calculation of factor value for potential to release by overland flow.* Sum the factor values for runoff and distance to surface water for the watershed and multiply this sum by the factor value for containment. Assign the resulting product as the factor value for potential to release by overland flow for the watershed. Enter this value in Table 4–1.

4.1.2.1.2.2 *Potential to release by flood.* Evaluate potential to release by flood for each watershed as the product of two factors: containment (flood) and flood frequency. Evaluate potential to release by flood separately for each source that is within the watershed. Furthermore, for each source, evaluate potential to release by flood separately for each category of floodplain in which the source lies. (See section 4.1.2.1.2.2.2 for the applicable floodplain categories.) Calculate the value for the potential to release by flood factor as specified in 4.1.2.1.2.2.3.

4.1.2.1.2.2.1 *Containment (flood).* For each source within the watershed, separately evaluate the containment (flood) factor for each category of floodplain in which the source is partially or wholly located. Assign a containment (flood) factor value from Table 4–8 to each floodplain category applicable to that source. Assign a containment (flood) factor value of 0 to each floodplain category in which the source does not lie.

4.1.2.1.2.2.2 *Flood frequency.* For each source within the watershed, separately evaluate the flood frequency factor for each category of floodplain in which the source is partially or wholly located. Assign a flood frequency factor value from Table 4–9 to each floodplain category in which the source is located.

4.1.2.1.2.2.3 *Calculation of factor value for potential to release by flood.* For each source within the watershed and for each category of floodplain in which the source is partially or wholly located, calculate a separate potential to release by flood factor value. Calculate this value as the product of the containment (flood) value and the flood frequency value applicable to the source for the floodplain category. Select the highest value calculated for those sources that meet the minimum size requirement specified in section 4.1.2.1.2.1.1 and assign it as the value for the potential to release by flood factor for the watershed. However, if, for this watershed, no source at the site meets the minimum size requirement, select the highest value calculated for the sources at the site eligible to be evaluated for this watershed and assign it as the value for this factor.

TABLE 4–7.—DISTANCE TO SURFACE WATER FACTOR VALUES

Distance	Assigned value
Less than 100 feet	25
100 feet to 500 feet	20
Greater than 500 feet to 1,000 feet	16
Greater than 1,000 feet to 2,500 feet	9
Greater than 2,500 feet to 1.5 miles	6
Greater than 1.5 miles to 2 miles	3

TABLE 4–8.—CONTAINMENT (FLOOD) FACTOR VALUES

Containment criteria	Assigned value
Documentation that containment at the source is designed, constructed, operated, and maintained to prevent a washout of hazardous substances by the flood being evaluated.	0
Other	10

TABLE 4–9.—FLOOD FREQUENCY FACTOR VALUES

Floodplain category	Assigned value
Source floods annually	50
Source in 10-year floodplain	50
Source in 100-year floodplain	25
Source in 500-year floodplain	7
None of above	0

Enter this highest potential to release by flood factor value for the watershed in Table 4–1, as well as the values for containment (flood) and flood frequency that yield this highest value.

4.1.2.1.2.3 *Calculation of potential to release factor value.* Sum the factor values assigned to the watershed for potential to release by overland flow and potential to release by flood. Assign this sum as the potential to release factor value for the watershed, subject to a maximum value of 500. Enter this value in Table 4–1.

4.1.2.1.3 *Calculation of drinking water threat-likelihood of release factor category value.* If an observed release is established for the watershed, assign the observed release factor value of 550 as the likelihood of release factor category value for that watershed. Otherwise, assign the potential to release factor value for that watershed as the likelihood of release factor category value for that watershed. Enter the value assigned in Table 4–1.

4.1.2.2 *Drinking water threat-waste characteristics.* Evaluate the waste characteristics factor category for each

p.5

the hazardous substance with the highest toxicity/persistence factor value for the watershed to assign the toxicity/persistence factor value for the drinking water threat for the watershed. Enter this value in Table 4–1.

4.1.2.2.2 *Hazardous waste quantity.* Assign a hazardous waste quantity factor value for the watershed as specified in section 2.4.2. Enter this value in Table 4–1.

4.1.2.2.3 *Calculation of drinking water threat-waste characteristics factor category value.* Multiply the toxicity/persistence and hazardous waste quantity factor values for the watershed, subject to a maximum product of 1 x 10[8]. Based on this product, assign a value from Table 2–7 (section 2.4.3.1) to the drinking water threat-waste characteristics factor category for the watershed. Enter this value in Table 4–1.

TABLE 4–12.—TOXICITY/PERSISTENCE FACTOR VALUES [a]

Persistence factor value	Toxicity factor value					
	10,000	1,000	100	10	1	0
1.0	10,000	1,000	100	10	1	0
0.4	4,000	400	40	4	0.4	0
0.07	700	70	7	0.7	0.07	0
0.0007	7	0.7	0.07	0.007	0.0007	0

[a] Do not round to nearest integer.

4.1.2.3 *Drinking water threat-targets.* Evaluate the targets factor category for each watershed based on three factors: nearest intake, population, and resources.

To evaluate the nearest intake and population factors, determine whether the target surface water intakes are subject to actual or potential contamination as specified in section 4.1.1.2. Use either an observed release based on direct observation at the intake or the exposure concentrations from samples (or comparable samples) taken at or beyond the intake to make this determination (see section 4.1.2.1.1). The exposure concentrations for a sample (that is, surface water, benthic, or sediment sample) consist of the concentrations of those hazardous substances present that are significantly above background levels and attributable at least in part to the site (that is, those hazardous substance concentrations that meet the criteria for an observed release).

When an intake is subject to actual contamination, evaluate it using Level I concentrations or Level II concentrations. If the actual contamination is based on an observed release by direct observation, use Level II concentrations for that intake. However, if the actual contamination is based on an observed release from samples, determine which level applies for the intake by comparing the exposure concentrations from samples (or comparable samples) to health-based benchmarks as specified in sections 2.5.1 and 2.5.2. Use the health-based benchmarks from Table 3–10 (section 3.3.1) in determining the level of contamination from samples. For contaminated sediments with no identified source, evaluate the actual contamination using Level II concentrations (see section 4.1.1.2).

4.1.2.3.1 *Nearest intake.* Evaluate the nearest intake factor based on the drinking water intakes along the overland/flood hazardous substance migration path for the watershed. Include standby intakes in evaluating this factor only if they are used for supply at least once a year.

Assign the nearest intake factor a value as follows and enter the value in Table 4–1:

- If one or more of these drinking water intakes is subject to Level I concentrations as specified in section 4.1.2.3, assign a factor value of 50.
- If not, but if one or more of these drinking water intakes is subject to Level II concentrations, assign a factor value of 45.
- If none of these drinking water intakes is subject to Level I or Level II concentrations, determine the nearest of these drinking water intakes, as measured from the probable point of entry (or from the point where measurement begins for contaminated sediments with no identified source). Assign a dilution weight from Table 4–13 to this intake, based on the type of surface water body in which it is located. Multiply this dilution weight by 20, round the product to the nearest integer, and assign it as the factor value.

Assign the dilution weight from Table 4–13 as follows:

TABLE 4–13.—SURFACE WATER DILUTION WEIGHTS

Type of surface water body [a]		Assigned dilution weight [b]
Descriptor	Flow characteristics	
Minimal stream	Less than 10 cfs [c]	1
Small to moderate stream	10 to 100 cfs	0.1
Moderate to large stream	Greater than 100 to 1,000 cfs	0.01
Large stream to river	Greater than 1,000 to 10,000 cfs	0.001
Large river	Greater than 10,000 to 100,000 cfs	0.0001
Very large river	Greater than 100,000 cfs	0.00001
Coastal tidal waters [d]	Flow not applicable, depth not applicable	0.0001
Shallow ocean zone [e] or Great Lake	Flow not applicable, depth less than 20 feet	0.0001
Moderate depth ocean zone [e] or Great Lake	Flow not applicable, depth 20 to 200 feet	0.00001
Deep ocean zone [e] or Great Lake	Flow not applicable, depth greater than 200 feet	0.000005
3-mile mixing zone in quiet flowing river	10 cfs or greater	0.5

[a] Treat each lake as a separate type of water body and assign a dilution weight as specified in text.
[b] Do not round to nearest integer.
[c] cfs = cubic feet per second.
[d] Embayments, harbors, sounds, estuaries, back bays, lagoons, wetlands, etc., seaward from mouths of rivers and landward from baseline of Territorial Sea.
[e] Seaward from baseline of Territorial Sea. This baseline represents the generalized U.S. coastline. It is parallel to the seaward limit of the Territorial Sea and other maritime limits such as the inner boundary of the Federal fisheries jurisdiction and the limit of States jurisdiction under the Submerged Lands Act, as amended.

- For a river (that is, surface water body types specified in Table 4–13 as minimal stream through very large river), assign a dilution weight based on the average annual flow in the river at the intake. If available, use the average annual discharge as defined in the U.S. Geological Survey Water Resources Data Annual Report. Otherwise, estimate the average annual flow.
- For a lake, assign a dilution weight as follows:
  - For a lake that has surface water flow entering the lake, assign a dilution weight based on the sum of the

p.6

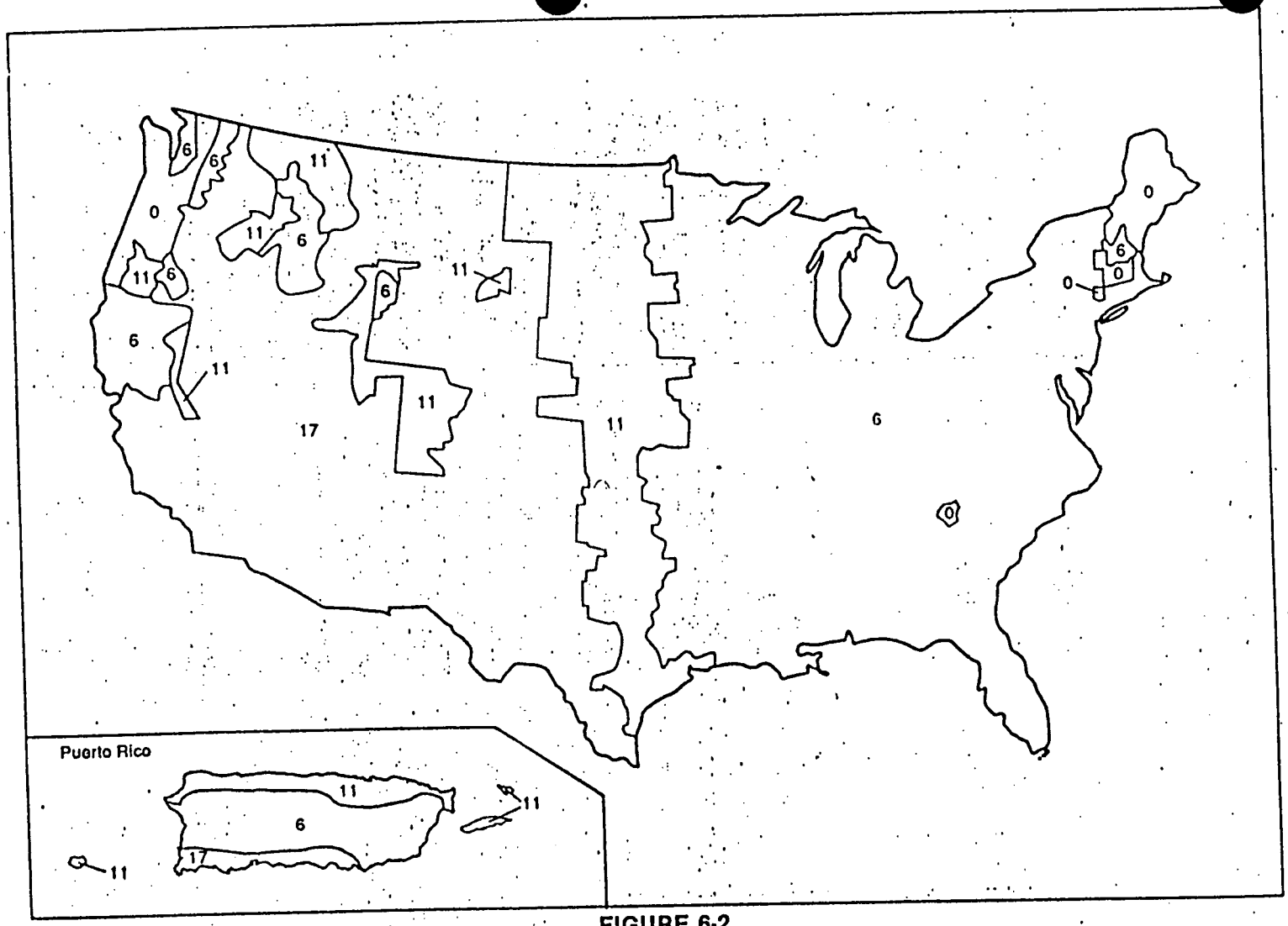

FIGURE 6-2
PARTICULATE MIGRATION POTENTIAL FACTOR VALUES

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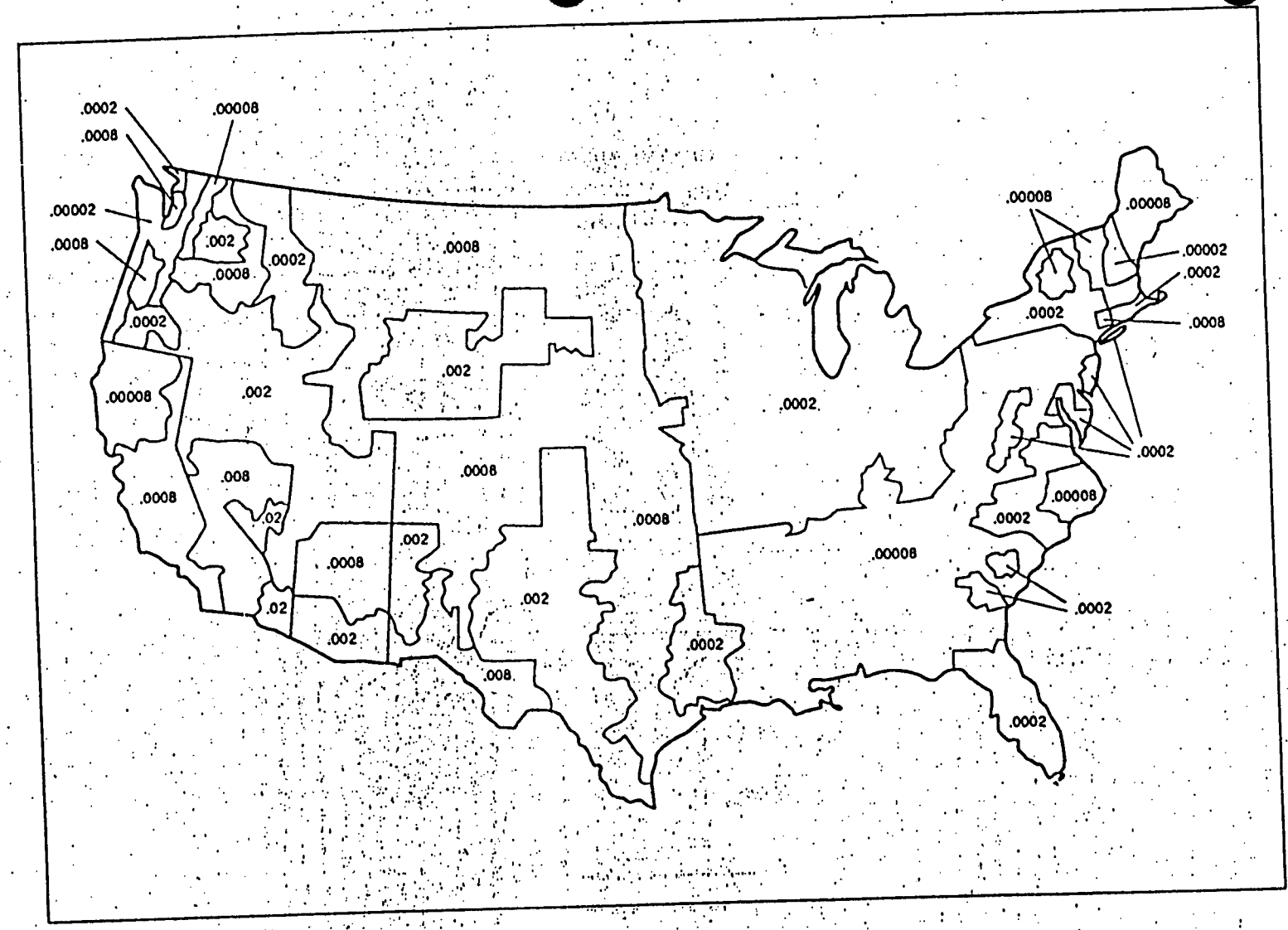


[a] Do not round to nearest integer.

FIGURE 6-3
PARTICULATE MOBILITY FACTOR VALUES[a]

p.8

4.1.4.2.2 *Hazardous waste quantity.* Assign the same factor value for hazardous waste quantity for the watershed as would be assigned in section 4.1.2.2.2 for the drinking water threat. Enter this value in Table 4–1.

4.1.4.2.3 *Calculation of environmental threat-waste characteristics factor category value.* For the hazardous substance selected for the watershed in section 4.1.4.2.1.4, use its ecosystem toxicity/persistence factor value and ecosystem bioaccumulation potential factor value as follows to assign a value to the waste characteristics factor category. First, multiply the ecosystem toxicity/persistence factor value and the hazardous waste quantity factor value for the watershed, subject to a maximum product of 1×10^8. Then multiply this product by the ecosystem bioaccumulation potential factor value for this hazardous substance, subject to a maximum product of 1×10^{12}. Based on this second product, assign a value from Table 2–7 (section 2.4.3.1) to the environmental threat-waste characteristics factor category for the watershed. Enter this value in Table 4–1.

TABLE 4–22.—ECOLOGICAL-BASED BENCHMARKS FOR HAZARDOUS SUBSTANCES IN SURFACE WATER

- Concentration corresponding to EPA Ambient Water Quality Criteria (AWQC) for protection of aquatic life (fresh water or marine).
- Concentration corresponding to EPA Ambient Aquatic Life Advisory Concentrations (AALAC).
- Select the appropriate AWQC and AALAC as follows:
  - –Use chronic value, if available: otherwise use acute value.
  - –If the sensitive environment being evaluated is in fresh water, use fresh water value, except: if no fresh water value is available, use marine value if available.
  - –If the sensitive environment being evaluated is in salt water, use marine value, except: if no marine value is available, use fresh water value if available.
  - –If the sensitive environment being evaluated is in both fresh water and salt water, or is in brackish water, use lower of fresh water or marine values.

TABLE 4–23.—SENSITIVE ENVIRONMENTS RATING VALUES

Sensitive environment	Assigned value
Critical habitat [a] for Federal designated endangered or threatened species	100
Marine Sanctuary	
National Park	
Designated Federal Wilderness Area	
Areas identified under Coastal Zone Management Act [b]	
Sensitive areas identified under National Estuary Program [c] or Near Coastal Waters Program [d]	
Critical areas identified under the Clean Lakes Program [e]	
National Monument [f]	
National Seashore Recreational Area	
National Lakeshore Recreational Area	
Habitat known to be used by Federal designated or proposed endangered or threatened species	75
National Preserve	
National or State Wildlife Refuge	
Unit of Coastal Barrier Resources System	
Coastal Barrier (undeveloped)	
Federal land designated for protection of natural ecosystems	
Administratively Proposed Federal Wilderness Area	
Spawning areas critical [g] for the maintenance of fish/shellfish species within river, lake, or coastal tidal waters	
Migratory pathways and feeding areas critical for maintenance of anadromous fish species within river reaches or areas in lakes or coastal tidal waters in which the fish spend extended periods of time	
Terrestrial areas utilized for breeding by large or dense aggregations of animals [h]	
National river reach designated as Recreational	
Habitat known to be used by State designated endangered or threatened species	50
Habitat known to be used by species under review as to its Federal endangered or threatened status	
Coastal Barrier (partially developed)	
Federal designated Scenic or Wild River	
State land designated for wildlife or game management	25
State designated Scenic or Wild River	
State designated Natural Areas	
Particular areas, relatively small in size, important to maintenance of unique biotic communities	
State designated areas for protection or maintenance of aquatic life [i]	5

[a] Critical habitat as defined in 50 CFR 424.02.
[b] Areas identified in State Coastal Zone Management plans as requiring protection because of ecological value.
[c] National Estuary Program study areas (subareas within estuaries) identified in Comprehensive Conservation and Management Plans as requiring protection because they support critical life stages of key estuarine species (Section 320 of Clean Water Act, as amended).
[d] Near Coastal Waters as defined in Sections 104(b)(3), 304(1), 319, and 320 of Clean Water Act, as amended.
[e] Clean Lakes Program critical areas (subareas within lakes, or in some cases entire small lakes) identified by State Clean Lake Plans as critical habitat (Section 314 of Clean Water Act, as amended).
[f] Use only for air migration pathway.
[g] Limit to areas described as being used for intense or concentrated spawning by a given species.
[h] For the air migration pathway, limit to terrestrial vertebrate species. For the surface water migration pathway, limit to terrestrial vertebrate species with aquatic or semiaquatic foraging habits.
[i] Areas designated under Section 305(a) of Clean Water Act, as amended.

p.9

REFERENCE 29

New Jersey
Date: 2/76
MLRA: 148

SOIL PROPERTIES AND SOIL SURVEY INTERPRETATIONS
Advance Copy - Subject to change

Prepared by Soil Conservation Service, USDA in Cooperation with Rutgers University

SERIES: Klinesville

Loam 5214-B,C,D,E

Classification:
Lithic Dystrochrepts, loamy-skeletal, mixed, mesic

Klinesville soils are reddish well drained moderately coarse textured soils containing much soft shale fragments especially in the lower part of the profile. They are shallow to shattered red shale bedrock. The soils are on strong to steep slopes.

Natural fertility is medium and available water capacity is low. Permeability is moderately rapid.

STREAM OVERFLOW HAZARD: None DEPTH TO BEDROCK: 1-1½ feet DEPTH TO SEASONALLY HIGH WATER: 3-5 feet+

ESTIMATED PHYSICAL AND CHEMICAL PROPERTIES (*based on test data)

Horizons	Typical depth from surface	Classification: USDA Texture Class 1/	Classification: Unified 2/	Classification: AASHO 3/	Coarse fragments >3 in.	Fractions passing sieve numbers: No. 4 4.7 mm	No. 10 2.0 mm	No. 40 0.42 mm	No. 200 0.074 mm	Liquid limit 4/	Plastic index 4/	Fraction smaller than 2mm: Silt 0.05-0.002mm	Clay <0.002mm
	inches				%	%	%	%	%	%	%	%	%
				**		**	**	**	**	**	**		
Ap	0-7	1	ML,CL	A-4, A-6	0	90-100	85-100	85-95	60-75	25-40	3-15	30-50	12-20
B,C	7-18	shl,vshl	SM,SC,ML, CL,GM,GP GC	A-1, A-2, A-4	10-30	30-85	30-85	10-70	5-55	20-40	0-10	25-45	10-15
R	18+	Rippable shale											

Depth from surface	Permeability	Available water 5/	Soil reaction, natural	Cation exchange capacity	Resistivity	Organic matter	Bulk density, in place	Maximum compacted density	Optimum moisture content	Shrink-swell potential	Consistence, in place
inches	inches per hour	inches/in of soil	pH	meq/100gm	1000 Ohms/cm	%	gm/cc	lbs/cu ft	%		
								**	**		
0-7	2.0-6.0	.11-.15	4.5-5.5	5-10	5+	2-6	1.3-1.5	-	-	Low	Friable
7-18	2.0-6.0	.08-.12	4.5-5.0	5-10	-	0-2	1.4-1.6	110-125	8-20	Low	Friable

SUITABILITY OF SOILS AS SOURCE OF MATERIALS

Topsoil	Poor: limited amount, shallow to bedrock
Sand and gravel	Unsuitable: none present
Roadfill	Poor: limited supply, shallow to bedrock
Embankment materials	Fair stability, fair to good compaction characteristics, fair to poor resistance to piping, high shale content

AGRICULTURAL INTERPRETATIONS

Slope and erosion 6/	Land capability class subclass and unit	Productivity index for corn	Farmland Assessment Soil Groups	Wildlife Suitability 7/: Open-land	Wood-land	Wetland	Woodland: Suitability Group	Species	Erodibility ("K" factor)	Hydrologic Soil Group
B	IIIe-66	-	C	3	1	4	4d			
C	IVe-66	-	D	3	1	4	4d	Black oak	.20	C
D	VIe-66	-	D	3	1	4		White oak		
E	VIIe-66	-	E	3	1	4		Chestnut oak		

1/ b-bouldery; c-clay, clayey; ch-channery; co-cobbly; e-extremely; f-fine; g-gravel, gravelly; l-loam, loamy; r-rocky; s-sand, sandy; sh-shaly; si-silt, silty; st-stony; v-very.
2/ Unified classification, Corps of Engineers.
3/ American Association of State Highway Officials.
4/ NL - Nonliquid; NP - Nonplastic.
5/ Field capacity minus 15 atmospheres.
6/ A- %; B-2-5%; C-5-10%; D-10-15%; E-15-25%
7/ Ratings: 1-Good; 2-Fair; 3-Poor; 4-Very Poor.
8/ Additional water may be available seasonally from groundwater.
** Rutgers Engineering soil surveys for Hunterdon and Somerset Counties.

p.1

SOIL LIMITATIONS FOR SELECTED USES SOIL: Kirksville

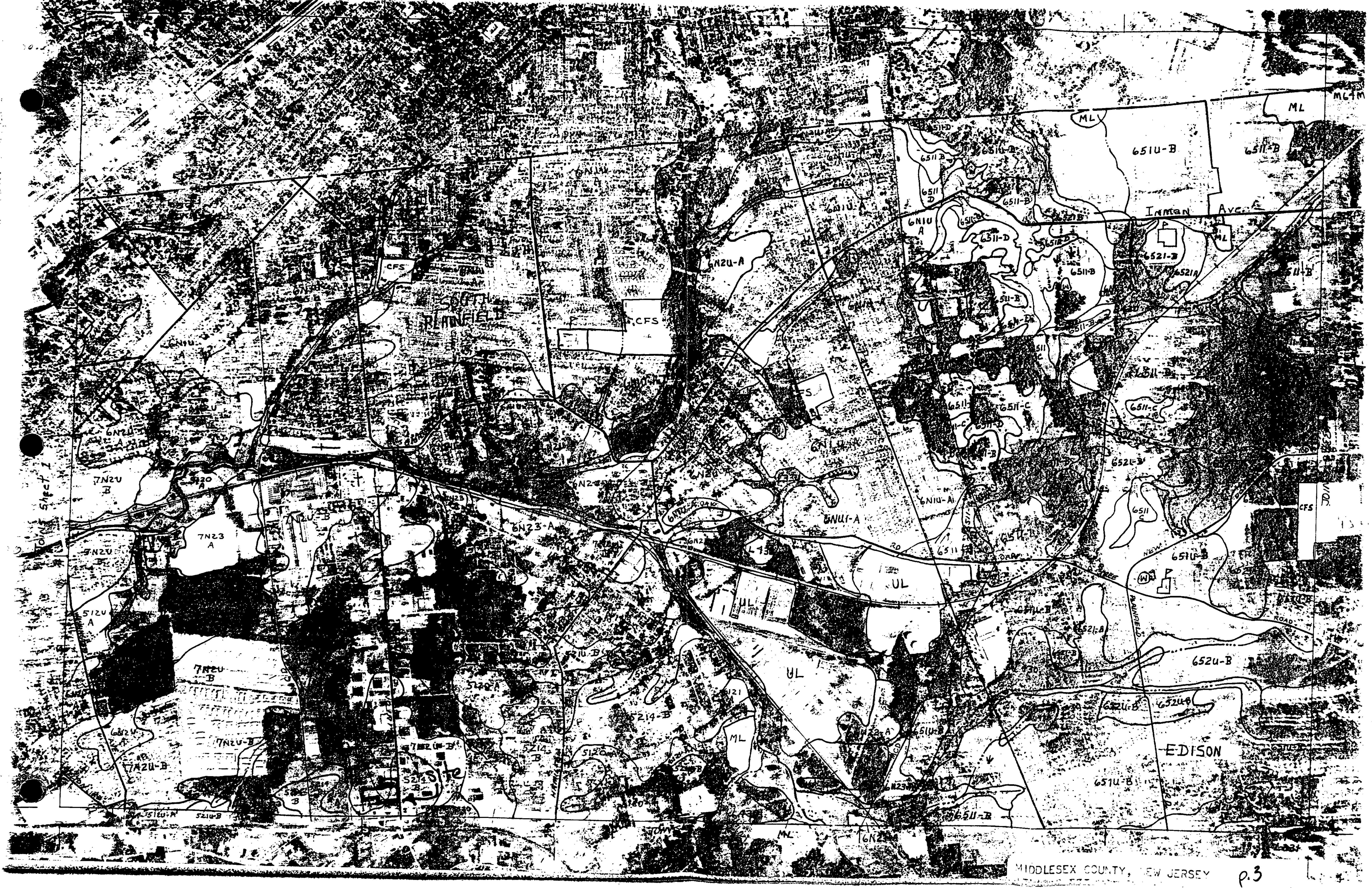
USE	SLIGHT	MODERATE	SEVERE
Pond reservoir area (Impoundment)			High seepage losses in shattered shale
Excavated ponds			Shallow depth to shale
Land drainage	Not needed		
Sprinkler irrigation		Moderately rapid intake rate, low available water capacity	
Terraces, diversions		Rippable shale bedrock at 1 to 1½ feet, highly shaly	
Land smoothing			Shallow depth to high content of shale fragments
Winter grading		Fair trafficability	
Pipeline construction and maintenance		Rippable shale bedrock at 1 to 1½ feet	
Shallow excavations		Rippable shale bedrock at 1 to 1½ feet	

DEGREE AND KIND OF SOIL LIMITATION FOR COMMUNITY DEVELOPMENT

USE	SLIGHT	MODERATE	SEVERE
Septic filter fields			Shallow depth to shale bedrock
Foundations for houses with basement		B,C,D slopes Rippable shale bedrock at 1 to 1½ feet D - slope limitation	E slopes Slope limitation
without basement		B,C,D slopes Rippable shale bedrock at 1 to 1½ feet, frost action potential moderate	E slopes Slope limitation
Local roads			Rippable shale bedrock at 1 to 1½ feet E - slope limitation
Parking lots		B, C slopes Slope limitation	D, E slopes Slope limitation
Camp sites, Trailers & tents	B, C slopes	D slopes Slope limitation	E slopes Slope limitation
Play areas Athletic fields			Shallow depth to bedrock C,D,E slopes Slope limitation
Picnic areas	B, C slopes	D slopes Slope limitation	E slopes Slope limitation
Paths and trails	B,C,D slopes	E slopes Slope limitation	
Lawns, landscaping, golf fairways			Shallow depth to bedrock E slopes Slope limitation
Sanitary landfill (trench method) 1/			Shallow depth to bedrock E slopes Slope limitation

1/ On-site investigations needed to determine conditions below 5 feet.

p.2


SOUTH PLAINFIELD
EDISON
Inman Ave.
CFS
ML
UL
651U-B
6511-B
6521-B
652U-B
6N1U-A
6N2U-A
6N23-A
7N2U-B
7N23 A
512U A
5214-B
5120-A
Site
Sheet 1
MIDDLESEX COUNTY, NEW JERSEY
p.3

REFERENCE 30

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM **PROJECT NOTE**

TO: Metz Metallurgical Corp. Site File

DATE: 12/15/99

FROM: Kiersten Dorneman

SUBJECT: Public Supply Wells

REFERENCE: References attached; Frost Data; 4-mile Radius Map

On 17 November 1999, START member Dorneman received public supply well information from Middlesex Water Company (MWC). MWC maintains 30 active wells at 4 different well fields within a 4-mile radius of the site. MWC serves a total population of approximately 212,000, 30% of which is supplied with groundwater (63,600 people). The groundwater is not blended with surface water supplied from the surface water intake located in the Delaware and Raritan Canal, New Brunswick, New Jersey. The total production for the entire groundwater system is 11.357 MGD. Since none of the wells supplies greater than 40% of the total groundwater system production, the population served was partioned equally between the wells.

On 8 December 1999, Dorneman received public supply well information from Elizabethtown Water Company (ET). ET maintains 14 active wells at 5 different well fields within a 4-mile radius of the site. ET serves a total population of approximately 565,821. The groundwater is blended with two surface water intakes, located at the confluence of the Raritan and Millstone Rivers, and in the Delaware and Raritan Canal. The surface water intakes supply approximately 85% of the total pumpage, and the average daily pumpage for the entire system was 131.667 MGD in 1998. Since the surface water supplies greater than 40% of the entire system, the populations served by the wells within a 4-mile radius of the site must be apportioned according to individual well pump rates. The 5 well fields within the 4-mile radius of the site have a total pumpage of 6.062 MGD, or 4.6% of the total system pumpage.

ET also sells water to 13 different water companies. The population served of each water company by ET was determined knowing the percentage each company purchased from ET. The population of each water company served by the ET wells within a 4-mile radius of the site was also determined and then apportioned evenly between the 14 wells. Therefore, 18 people were added to the 2-3 mile ring and 65 people were added to the 3-4 mile ring.

The private well populations were determined from Frost Data obtained by START member Minsavage on 27 November 1998.

Population served within each target distance ring by public and private wells.

Distance:	Population:	
	Public wells	Private Wells
0-1/4 mile	0	47
>1/4-1/2 mile	0	135
>1/2-1 mile	0	358
>1-2 miles	6,360	1,576
>2-3 miles	43,532	2,051
>3-4 miles	39,842	2,121
Total population	89,734	6,288

Elizabethtown Water Company
Population Apportionment

Well Name	Station Identifier	Distance Ring	Pump Rate (MGD)	% of Total Supply	Population Served
Green Brook Well #1	10	3-4 mile	0.446	0.34	1917
Green Brook Well #2	10	3-4 mile	0.936	0.71	4022
Green Brook Well #3	10	3-4 mile	0.086	0.07	370
Green Brook Well #4	10	3-4 mile	0.504	0.38	2166
Green Brook Well #5	10	3-4 mile	0.454	0.34	1951
Green Brook Well #6	10	3-4 mile	0.403	0.31	1732
Green Brook Well #7	10	3-4 mile	0.259	0.20	1113
Green Brook Well #8	10	3-4 mile	0.216	0.16	928
Green Brook Well #9	10	3-4 mile	0.72	0.55	3094
Green Brook Well #11	10	3-4 mile	0.288	0.22	1238
Rock Ave., Green Brook	2	3-4 mile	0.504	0.38	2166
Rock Ave., Piscataway	5	2-3 mile	0.216	0.16	928
8th St. Well	7	2-3 mile	0.346	0.26	1487
Clinton Ave. Well	8	2-3 mile	0.684	0.52	2939

% of Total Supply = (pump rate/total system pump rate)*100
Population Served = [(% of total supply)/100]*(total population served)

Middlesex Water Company
Population Apportionment

Well Name	Station Identifier	Distance Ring	Pump Rate (MGD)	% of Total Supply	Population Served
Tingley North Well 1	NTL	3-4 mile	0.77	6.78	2120
Tingley North Well 3	NTL	3-4 mile	0.76	6.69	2120
Tingley North Well 4	NTL	3-4 mile	1.20	10.57	2120
Tingley North Well 2	NTL	3-4 mile	0.38	3.35	2120
Tingley North Well 5	NTL	3-4 mile	0.48	4.23	2120
Tingley North Well 6	NTL	3-4 mile	0.58	5.11	2120
Tingley North Well 7	NTL	3-4 mile	0.43	3.79	2120
Tingley North Well 8	NTL	3-4 mile	0.70	6.16	2120
Tingley North Well 9	NTL	3-4 mile	0.48	4.23	2120
Sprague Well 1	PA	2-3 mile	1.20	10.57	2120
Well 23	PA	2-3 mile	1.00	8.81	2120
Maple Ave Well	MA	2-3 mile	0.80	7.04	2120
Sprague Well 2	PA	2-3 mile	1.30	11.45	2120
Well 25	PA	2-3 mile	1.40	12.33	2120
Well 26	PA	2-3 mile	0.34	2.99	2120
Well 27	PA	2-3 mile	0.18	1.58	2120
Spring Lake Well 6	SPLK	1-2 mile	0.40	3.52	2120
Well 28	PA	2-3 mile	0.29	2.55	2120
Well 29	PA	2-3 mile	0.60	5.28	2120
Well 30	PA	2-3 mile	0.37	3.26	2120
Well 32	PA	2-3 mile	0.20	1.76	2120
Spring Lake Well 8	SPLK	1-2 mile	0.40	3.52	2120
Spring Lake Well 9	SPLK	1-2 mile	0.18	1.58	2120
Well 31	PA	2-3 mile	0.58	5.11	2120
Well 18	PA	2-3 mile	0.80	7.04	2120
Well 19	PA	2-3 mile	0.16	1.41	2120
Well 20	PA	2-3 mile	0.69	6.08	2120
Well 21	PA	2-3 mile	0.80	7.04	2120
Well 22	PA	2-3 mile	0.18	1.58	2120
Well 24	PA	2-3 mile	0.56	4.93	2120

30% of the total population (population served) = 63600

% of Total Supply = (pump rate/total system pump rate)*100
Population Served = population served/total number of wells

Purchasers of Elizabethtown Water Company's Water
Population Apportionment

Purchaser	% of Total Supply Purchased	Total Population	Population Served by ET	Population Served by ET Wells within 4-mile Radius
Twp of Edison	100	11568	11568	5
City of Elizabeth	100	17850	17850	8
Twp of Franklin	85	35000	29750	14
Lawrenceville Water Co.	95	8904	8458.8	4
Manville Water Dept.	100	11000	11000	5
Middlesex Water Co.	7	250000	17500	8
Monroe Twp MUA	17	25335	4306.95	2
NJ American Water Co.	25	210000	52500	24
South Brunswick	35	36000	12600	6
Winfield Park	100	15000	15000	7
			Total:	83

% of ET total system pumpage within 4-mile radius= 4.60%

Population Served by ET = (%of Total Supply Purchased/100)*Total Population
Population Served by ET Wells within 4-mile Radius =
(Population Served by ET)*(% of ET total system pumpage within 4-mile radius/100)

MIDDLESEX WATER COMPANY

1500 Ronson Road
P.O. Box 1500
Iselin, New Jersey 08830-0452

Tel. (732) 634-1500
Fax (732) 750-5981

NASDAQ Stock Market Symbol: MSEX

November 17, 1999

Ms. Kiersten Dorneman
Roy F Weston, Inc.
Suite 201
1090 King Georges Post Rd.
Edison, NJ 08837-3703

Dear Ms. Dorneman,

Enclosed is the information you requested on our wellfields.

In addition I have enclosed a map delineating the boundaries of our service area.

Regarding the other questions in your letter...

Middlesex Water Company serves a population of approximately 212,000 via 54,185 service connections.

Water from each of our well fields is not blended with our surface water.

Middlesex Water Company does sell water on a wholesale basis to several communities, but they are supplied by our surface water plant.

Middlesex Water Company does purchase water from Elizabethtown Water Company through an interconnection by our Tingley Lane Wellfield.

I trust this information will answer your questions. If you have any additional questions please feel free to call.

Sincerely,

Frank A. Falco
Asst. Director of Production

(WestonKD1199.doc)

Middlesex Water Co.

Well Name	NJDEP No.	Depth (feet)	Aquifer	Location (cross streets)	Latitude	Longitude	Pump Rate (MGD) or Percentage	Active	
Tingley North Well 1	25-00408	502	BF	Tingley Ln	40 35 29.925	74 22 28.886	.77	Y	NTL
Tingley North Well 3	25-02008	560	BF	Tingley Ln	40 35 29.679	74 22 33.835	.76	Y	NTL
Tingley North Well 4	25-02009	507	BF	Tingley Ln	40 35 29.679	74 22 33.835	1.2	S	NTL
Tingley North Well 2	25-03970	508	BF	Tingley Ln	40 35 37.787	74 22 27.165	.38	Y	NTL
Tingley North Well 5	25-04516	528	BF	Tingley Ln	40 35 25.91	74 22 48.105	.48	Y	NTL
Tingley North Well 6	25-04517	540	BF	Tingley Ln	40 35 34.655	74 22 13.331	.58	Y	NTL
Tingley North Well 7	25-05432	608	BF	Tingley Ln	40 35 27.556	74 22 12.876	.43	Y	NTL
Tingley North Well 8	25-05637	629	BF	Tingley Ln	40 35 22.133	74 22 12.373	.7	Y	NTL
Tingley North Well 9	25-05674	760	BF	Tingley Ln	40 35 13.842	74 22 17.332	.48	Y	NTL
Sprague Well 1	25-09603	151	BF	Sprague Ave	40 36 1.547	74 23 59.791	1.2	Y	PA
Well 23	25-09763	79	BF	Park Ave	40 35 57.353	74 24 23.299	1.0	Y	PA
Maple Ave Well	25-10001	351	BF	Maple & Park A	40 35 32.561	74 24 1.202	.8	Y	MA
Sprague Well 2	25-11464	151	BF	Sprague Ave	40 36 2.144	74 23 50.921	1.3	Y	PA
Well 25	25-11815	448	BF	Park Ave	40 35 35.265	74 24 29.731	1.4	Y	PA
Well 26	25-11816	495	BF	Park Ave	40 35 38.456	74 24 38.577	.34	Y	PA
Well 27	25-11822	501	BF	Park Ave	40 35 43.06	74 24 30.195	.18	Y	PA
Spring Lake Well 5	25-11823	500	BF	Maple Ave	40 35 4.683	74 24 48.299	O/S	N	SPLK
Spring Lake Well 6	25-11828	504	BF	Maple Ave	40 34 59.584	74 24 43.314	.4	Y	SPLK
Well 28	25-12119	500	BF	Park Ave	40 35 46.134	74 24 41.921	.29	Y	PA
Well 29	25-12120	500	BF	Park Ave	40 35 47.974	74 24 21.948	.6	Y	PA
Well 30	25-12130	402	BF	Park Ave	40 35 55.385	74 24 28.948	.37	Y	PA
Well 32	25-12131	501	BF	Park Ave	40 35 52.01	74 24 39.986	.2	Y	PA
Spring Lake Well 8	25-12364	500	BF	Maple Ave	40 35 11.801	74 24 35.562	.4	Y	SPLK
Spring Lake Well 9	25-12365	500	BF	Maple Ave	40 35 16.791	74 24 38.631	.18	Y	SPLK
Well 31	25-12461	500	BF	Park Ave	40 35 52.591	74 24 34.22	.58	Y	PA
Well 18	45-00274	74	BF	Park Ave	40 36 1.857	74 24 17.115	.8	Y	PA
Well 19	45-00275	78	BF	Park Ave	40 35 53.776	74 24 20.627	.16	Y	PA

Middlesex Water Co.

Well Name	NJDEP No.	Depth (feet)	Aquifer	Location (cross streets)	Latitude	Longitude	Pump Rate (MGD) or Percentage	Active	
Well 20	45-00276	82	BF	Park Ave	40 35 59.749	74 24 10.973	.69	Y	PA
Well 21	45-00277	73	BF	Park Ave	40 36 0.295	74 24 26.346	.8	Y	PA
Well 22	45-00278	451	BF	Park Ave	40 35 48.927	74 24 30.2	.18	Y	PA
Well 24	45-00279	115	BF	Park Ave	40 35 56.484	74 24 38.865	.56	Y	PA

*if preferable, please plot the locations of the wells on the attached map

S - Standby

BF- Brunswick Formation

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM		TELECON NOTE
CONTROL NO:	DATE: 11/22/99	TIME: 1600
DISTRIBUTION: Metz Metallurgical Corp.		
BETWEEN: Frank Falco, Asst. Director of Production	OF Middlesex Water Co.	PHONE 732-634-1500
AND Kiersten Dorneman		

DISCUSSION

KD called Mr. Falco in response to a letter received from the Middlesex Water Company, dated 17 November 1999 . Mr. Falco informed KD that Middlesex Water Company's surface water intake is located in the Delaware and Raritan Canal in New Brunswick, New Jersey. The population served by the water company as listed in the letter is the total population served by both the surface water and groundwater systems. The surface water intake serves approximately 70% of the total population. The remainder of the total population is served by the groundwater system. The total production for the entire groundwater system is 11.357 MGD. Middlesex Water Company purchases approximately 2% of its total production from the Elizabethtown Water Company. Tingley North Well 4 is an active well.

ACTION ITEMS:

Elizabethtown Water Company

Netherwood Operations Center: 1341 North Avenue, Plainfield, NJ 07062 (908) 654-1234
Mailing Address: P.O. Box 111, Plainfield, NJ 07061-0001

December 8, 1999

Ms. Kiersten Dorneman
Project Manager
Roy F. Weston Inc.
Federal Programs Division
Suite 201
1090 King Georges Post Road
Edison, NJ 08837-3703

RE: TDD No.: 02-98-08-0049
Document Control No.: START-02-F-03242

Dear Ms. Dorneman:

Enclosed please find the information you requested from Elizabethtown related to wells owned and operated within your specified area of Elizabethtown Water Company.

In addition, I offer the following answer to your questions:

(1) As of January 1, 1998, Elizabethtown Water Company provided water to approximately 565,821 customers via 195,990 service connections. The service area is delineated on your map.

(2) Only the wells at locations 2, 5, 7, 8, and 10 are in service.

(3) The intakes are located at the confluence of the Raritan and Millstone Rivers, and the D&R Canal - not shown on your map. For 1998, total surface water pumpage averaged 118,673,000 gallons per day.

(4)

Facility	Avg. Annual Pumpage (MGD)	% of Total
Green Brook Well Field	2.84	2.16%
Rock Avenue, Green Brook	0.155	0.12%
Rock Avenue, Piscataway	0.178	0.14%
Eighth Street Well	0.278	0.21%
Clinton Avenue Well	0.280	0.21%

(5) Average Daily Pumpage for the entire system in 1998 was 131.667 MGD.

(6)

Purchaser	Thousand Gallons Supplied
Edison, Township of	2,291,236
Elizabeth, City of	3,406,491
Flemington Water Department	422
Franklin, Township of	1,373,923
Highland Park, Boro of	0
Lawrenceville Water Company	182,433
Manville Water Department	188,744
Middlesex Water Company	1,142,265
Monroe Township MUA	199,897
New Brunswick Water Department	2,065
New Jersey American Water Company North	4,588,074
Rahway Water Department	340,205
Rocky Hill	0
South Brunswick	640,012
Winfield Park	41,633

(7)

Seller	Purchased (Thousand Gallons)
East Windsor	477
New Jersey American Water Company North	2,774
Newark, City of	5,017

Should you have any questions or require additional information, please contact me at (908) 301-3430.

Very truly yours,

Richard A. Sadowski
Director, Wells & Stations

RAS/lbg
Enclosures

M:\SADOWSKI\CORRES\Dorneman

Roy F. Weston, Inc.
Federal Programs Division
Suite 201
1090 King Georges Post Road
Edison, New Jersey 08837-3703
732-225-6116 • Fax 732-225-7037

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
EPA CONTRACT 68-W5-0019

26 May 1999

Mr. Richard Sadowski
Elizabethtown Water Company

TDD NO.: 02-98-08-0049
DOCUMENT CONTROL NO.: START-02-F-03242
SUBJECT: INFORMATION REQUEST
VIA FACSIMILE

Dear Mr. Sadowski:

The U.S. Environmental Protection Agency (USEPA) has tasked Roy F. Weston, Inc. (Weston) under Weston's Superfund Technical Assessment and Response Team (START) contract to conduct an investigation of a property located in South Plainfield, Middlesex County, New Jersey. Part of the investigation will include an evaluation of groundwater within 4-miles of the subject property, in accordance with the Hazard Ranking System (HRS). Information received from the New Jersey Department of Environmental Protection indicates that wells owned and operated by the Elizabethtown Water Company are located within the target distance limit; therefore, please confirm or update the following:

The Elizabethtown Water Company operates public/municipal supply wells and two surface water intakes; the water is blended prior to distribution. We are only interested in obtaining the following information for those wells within the delineated area on the enclosed map. Using the following table, please provide specifics regarding each of the wells within the specified area (please draw a line through any of the listed wells which are no longer in service):

Well Name (Plainfield)	NJDEP Well No.	Depth (feet)	Aquifer	Location [1] (nearest cross street)	Latitude / Longitude (if known) [1]	Pump Rate (MGD) or percentage
Netherwood #1						
Netherwood #2						
Netherwood #3						
Netherwood #4						

1 - if preferable, please plot the locations of the wells on the attached map.

Well Name (Plainfield)	NJDEP Well No.	Depth (feet)	Aquifer	Location [1] (nearest cross street)	Latitude / Longitude (if known) [1]	Pump Rate (MGD) or percentage
Netherwood #4G						
Netherwood #4R						
Netherwood #5						
Netherwood #6						
Netherwood #7						
Netherwood #8						
Netherwood #9						
Netherwood #10						
Netherwood #11						
City of Plainfield	4500027	305'	PASSAIC	#3	403620 742700	0.576
Fifth Street	2512961	350'	PASSAIC	#6	403550 742620	0.346
George Street						
Prospect Avenue						
Watchung Avenue						

1 - if preferable, please plot the locations of the wells on the attached map.

WESTON

In order to further assist you, I have provided you with a blank table for those wells (not included in the previous table) which are located within the delineated area (shown on the enclosed map).

Well Name	NJDEP Well No.	Depth (feet)	Aquifer	Location[1] (nearest cross street)	Latitude / Longitude (if known)[1]	Pump Rate (MGD) or percentage
GREENBROOK WELL #1	4500023	450	PASSAIC	#10	403555 742755	0.446
GREENBROOK WELL #2	4500024	376	PASSAIC	#10	403555 742800	0.936
GREENBROOK WELL #3	4500025	550	PASSAIC	#10	403600 742805	0.086
GREENBROOK WELL #4	4500026	400	PASSAIC	#10	403550 742757	0.504
GREENBROOK WELL #5	2500572	454	PASSAIC	#10	403552 742805	0.454
GREENBROOK WELL #6	2500632	473	PASSAIC	#10	403553 742811	0.403
GREENBROOK WELL #7	2500633	545	PASSAIC	#10	403556 742810	0.259
GREENBROOK WELL #8	2502715	445	PASSAIC	#10	403554 742758	0.216
GREENBROOK WELL #9	2502716	507	PASSAIC	#10	403555 742750	0.720
GREENBROOK WELL #11	2502717	433	PASSAIC	#10	403556 742815	0.288
ROCK AVE GREENBROOK	2512665	350	PASSAIC	# 2	403611 742739	0.504
ROCK AVE PISCATAWAY	2513248	350	PASSAIC	# 5	403600 742726	0.216
8TH ST WELL	2512632	350	PASSAIC	# 7	403545 742555	0.346
CLINTON AVE WELL	2513354	350	PASSAIC	# 8	403540 742600	0.684

1 - if preferable, please plot the locations of the wells on the attached map.

WESTON

Well Name (Scotch Plains)	NJDEP Well No.	Depth (feet)	Aquifer	Location [1] (nearest cross street)	Latitude / Longitude (if known) [1]	Pump Rate (MGD) or percentage
BOARD OF ED WELL	4500022	311	PASSAIC	#4	403643 742651	0.576
ROCKVIEW TERRACE WELL	2513106	400	PASSAIC	#1	403709 742621	0.288
ROCKVIEW AVE. WELL	2513898	220	PASSAIC	#9	403653 742622	0.432

1 - if preferable, please plot the locations of the wells on the attached map.

As of December 1989, the Elizabethtown Water Company provided water to approximately 675,000 people via 91,474 service connections; please delineate the service area on the attached map and verify the total population served by the entire system.

Are all of the wells located within the area of concern regularly in use?

You indicated that the surface water intakes provide approximately 85% of the total system volume. Please provide the location of the surface water intakes and the annual pumpage.

Using the table above, please provide the percentages, capacity, or annual pumpage for each well within the delineated area.

What is the total average pumpage for the entire system?

Does the Elizabethtown Water Company sell water to any other water systems (if yes, how much and to whom)?

Does the Elizabethtown Water Company purchase water from any other water systems (if yes, how much and from whom)?

We would greatly appreciate it if you would provide this information before 11 June 1999. Please contact me [(732) 225-6116] if you have any questions regarding this request. Again, thank you for your time and cooperation.

Very truly yours,
ROY F. WESTON, INC.

Kiersten Dorneman

Kiersten Dorneman
Project Manager

enclosure

cc: W. S. Butterfield, START
START project file

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM		TELECON NOTE
CONTROL NO:	DATE: 12/13/99	TIME: 0800
DISTRIBUTION: Metz Metallurgical Corp.		
BETWEEN: Rich Sadowski Director, Wells & Stations	OF Elizabethtown Water Co.	PHONE 908-301-3430
AND Kiersten Dorneman		

DISCUSSION

KD called Mr. Sadowski in response to a letter received from the Elizabethtown Water Company, dated 8 December 1999 . Mr. Sadowski informed KD that Elizabethtown Water Company's surface water intakes provide approximately 85% of the total pumpage. The surface water and groundwater systems are interconnected. The water purchased from East Windsor, New Jersey American Water Company North, and City of Newark is approximately 0.02% of the total pumpage.

ACTION ITEMS:

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM		TELECON NOTE
CONTROL NO:	DATE: 12/16/99	TIME: 1130
DISTRIBUTION: Metz Metallurgical Corp.		
BETWEEN: Rich Sadowski Director, Wells & Stations	OF Elizabethtown Water Co.	PHONE 908-301-3430
AND Kiersten Dorneman		

DISCUSSION

Mr. Sadowski called KD in response to a question KD had about the Elizabethtown Water Co.'s (ET) sales of water to Edison Township and the City of Elizabeth, NJ. Mr. Sadowski informed KD that ET serves 11,568 people of Edison. ET serves 17,850 residents of Elizabeth.

ACTION ITEMS:

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM		TELECON NOTE
CONTROL NO:	DATE: 12/13/99	TIME: Start 0915 Finish
BETWEEN 13 water companies/ Departments	OF	PHONE
AND Melissa Kaplan		

DISCUSSION:

START member Kaplan telephoned 13 water companies/ departments for the Metz site in order to determine the total percentage of pumpage that is purchased from Elizabethtown Water Company, as well as, the total population that each company/department serves. Refer to the attach chart for details on the 13 phone conversations.

METZ/ELIZABETHTOWN WATER COMPANY WELL INFO								
WATER CO	CONTACT	POSITION	PHONE NO	DATE	TIME	%	TOTAL POP	NOTES
Twp of Edison			732-287-0900	12/13/99				
City of Elizabeth			908-820-4108	12/13/99				
Flemington Water Dept	Ralph Runge	Superintendent	908-782-8840	12/14/99	945	0%	5,000	Interconnection used for fire protection only
Twp of Franklin	Andy Dwiford	Superintendent	732-249-7800	12/13/99	945	85%	35,000	
Lawrencville Water Co	Ron Texeria	Superintendent	609-896-0919	12/13/99	1100	95%	8,904	
Manville Water Dept	David Tarby	Foreman	908-725-0241	12/13/99	955	100%	11,000	
Middlesex Water Co	Rick Risoldi	Superintendent	732-634-1500	12/13/99	930	7%	250,000	
Monroe Twp MUA	John Stevens	Superintendent	732-521-1700	12/13/99	1600	17%	25,335	
New Brun. Water Dept	Ed O'Rorke	Superintendent	732-745-5060	12/14/99	1030	0%	100,000	Interrconnection used for emergency only
NJ American Water Co	Mike Roberti	Superintendent	973-564-5728	12/13/99	1110	25%	210,000	Do not maintain wells in 4mi radius
Rahway Water Dept.	Paul Kozakiewicz	Superintendent	732-388-0086	12/14/99	950	0%	25,000	Et sells water directly to an industrial company
South Brunswick	Larry Merk	Superintendent	732-329-4000 ext262	12/13/99	1015	35%	36,000	
Winfield Park	Paul Greig	Manager	908-486-5012	12/13/99	1050	100%	15,000	

REFERENCE 31

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM		TELECON NOTE
CONTROL NO:	DATE: 3 June 1999	TIME: 1515
DISTRIBUTION: Iceland Coin Laundry and Dry Cleaning Groundwater Contamination		
CONVERSATION WITH: Steve Spayd	OF NJGS	PHONE (609) 984-6587
RECORDED BY: Diane Minsavage, Region II START		

DISCUSSION:

Wellhead Protection Area

The Well Head Protection Program was taken over by the Source Water Assessment Program. The Source Water Assessment Program defines the sources of water; therefore, the source of water obtained from wells would be groundwater. A Preliminary Assessment Plan was put in 1998; the plan will be sent to the EPA this month. The Well Head Protection Areas (WHPAs) have not been delineated yet - there is just a plan. Some areas (counties) have draft WHPA maps; there are draft WHPA maps for Cumberland County. SS can determine if site overlies WHPA or if WHPA is located within 4 miles of the site; SS indicated that it was very likely that a WHPA is located within 4 miles of the site. To obtain site specific info - fax a map showing the location of the site on a topo map with a the request (i.e., does the site overlie WHPA and/or is WHPA located within 4 miles of the site) noting information is needed by tomorrow to SS at (609) 633-1004.

Signature: Diane Minsavage

Ref. 23, p. 1/1

REFERENCE 32

U.S. Geological Survey
Water Resources Division
Mountain View Office Park
810 Bear Tavern Road, Suite 206
West Trenton, New Jersey 08628

Date May 25, 1999

Gerald Gilliland
Roy F. Weston, Inc.
Superfund Technical Assessment & Response Team
1090 King Georges Post Road, Suite 201
Edison, NJ 08837

_____ Flood Prone Area Map(s) you requested is/are enclosed.

_____ Reports you requested are enclosed:

_____ Report you requested is not published yet. We will add your name to our mailing list and fill your request upon publication.

_____ Report/Information you requested is not available or out of print.

_____ Report/Map you requested may be purchased from NJ Geological Survey, Map and Publications Sales Office, Bureau of Revenue, 428 E. State Street, Carroll Building Basement, P.O. Box CN402, Trenton, NJ 08625.

_____ Report you requested may be purchased from National Technical Information Service (NTIS), U.S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161. NTIS Order No._____

X Ground-water data

Nancy Gibbs for
Kathleen Hibbs

p.1

02-98-09-0011
Metz Metallurgical

NEW JERSEY UNIQUE NUMBER	SITE-ID	LOCAL WELL NUMBER	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	LAT/LONG DATUM (CODE)	COUNTY	TOWNSHIP
230036	403535074274001	NORTH AVE	403535	0742740	NAD27	023	DUNELLEN BORO
230093	403253074234501	EAC 2	403253	0742345	NAD27	023	EDISON TWP
230209	403254074223401	2 PREM PLASTIC	403254	0742234	NAD27	023	METUCHEN BORO
230335	403544074260901	834 CLINTON	403544	0742609	NAD27	023	SOUTH PLAINFIELD BORO
230336	403550074244001	31 PARK AVE	403550	0742440	NAD27	023	SOUTH PLAINFIELD BORO
230337	403552074233401	28 PARK AVE	403552	0742334	NAD27	023	SOUTH PLAINFIELD BORO
230338	403553074233701	29 PARK AVE	403553	0742337	NAD27	023	SOUTH PLAINFIELD BORO
230339	403554074233201	32 PARK AVE	403554	0742332	NAD27	023	SOUTH PLAINFIELD BORO
230340	403555074233501	30 PARK AVE	403555	0742429	NAD27	023	SOUTH PLAINFIELD BORO
230550	403537074272001	AC PRINTING 5	403537	0742720	NAD27	023	PISCATAWAY TWP
230933	403549074260801	EIGHTH STREET	403549	0742608	NAD27	023	SOUTH PLAINFIELD BORO
230934	403208074241801	FOUR	403208	0742418	NAD27	023	EDISON TWP
231053	403110074281201	RUTGERS GOLF COURSE	403110	0742812	NAD27	023	PISCATAWAY TWP
231055	403527074222301	TINGLEY LANE 5	403527	0742223	NAD27	023	EDISON TWP
231071	403545074243301	PARK 25	403545	0742433	NAD27	023	SOUTH PLAINFIELD BORO
231072	403536074222801	TINGLEY 2	403536	0742228	NAD27	023	EDISON TWP
231079	403330074284301	BACKUP-1983	403330	0742843	NAD27	023	PISCATAWAY TWP
231080	403330074284201	1977-MAIN	403330	0742842	NAD27	023	PISCATAWAY TWP
231165	403119074290301	RUTGERS GOLF 13 OBS	403108	0742812	NAD27	023	PISCATAWAY TWP
231183	403118074274301	RU-5	403118	0742743	NAD27	023	PISCATAWAY TWP
231184	403118074274302	RU-2	403118	0742743	NAD27	023	PISCATAWAY TWP
231185	403118074274303	RU-4	403118	0742743	NAD27	023	PISCATAWAY TWP
231186	403120074274201	RU-3	403120	0742742	NAD27	023	PISCATAWAY TWP
231187	403112074275401	B-6	403112	0742754	NAD27	023	PISCATAWAY TWP
231188	403114074280701	B-9	403114	0742807	NAD27	023	PISCATAWAY TWP
231189	403116074274501	B-5	403116	0742745	NAD27	023	PISCATAWAY TWP
231190	403117074274301	B-4	403117	0742743	NAD27	023	PISCATAWAY TWP
231191	403118074275701	B-1	403118	0742757	NAD27	023	PISCATAWAY TWP
231192	403118074275702	B-3	403118	0742757	NAD27	023	PISCATAWAY TWP
231194	403113074244701	PROPOSED FILTER PLANT TW	403113	0742447	NAD27	023	EDISON TWP
231195	403539074270101	ROCK AVE	403539	0742701	NAD27	023	PISCATAWAY TWP
231201	403458074245001	SPRING LAKE 5	403458	0742450	NAD27	023	SOUTH PLAINFIELD BORO
231202	403459074244201	SPRING LAKE 6	403459	0742442	NAD27	023	SOUTH PLAINFIELD BORO

P.2

NEW JERSEY UNIQUE NUMBER	AQUIFER CODE	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)	CASING MATERIAL	PRIMARY USE OF SITE	PRIMARY USE OF WATER	NEW JERSEY PERMIT NUMBER
230036	227BRCKS	600	64.00	600.00	-	W	N	25-14905
230093	227BRCKS	301	26.00	301.00	-	W	N	25-12900
230209	227BRCKS	161	72.00	161.00	-	W	N	25-15138
230335	227BRCKS	350	77.00	350.00	-	W	P	25-13354
230336	227BRCKS	500	--	--	-	W	P	--
			110.00	500.00	-			25-12461
230337	227BRCKS	500	--	--	-	W	P	--
			97.00	500.00	-			25-12119
230338	227BRCKS	500	--	--	-	W	P	--
			109.00	500.00	-			25-12120
230339	227BRCKS	501	--	--	-	W	P	--
			88.00	501.00	-			25-12131
230340	227BRCKS	500	--	--	S	W	P	--
			97.83	500	S			25-12130
230550	227BRCKS	325	--	--	-	W	C	25-00762
230933	227BRCKS	350	81	350	-	W	P	25-12632
230934	227BRCKS	500	50	500	S	W	N	25-23302
231053	227BRCKS	300	55	300	S	W	I	25-21440.1
231055	227BRCKS	532	40.18	532	S	W	P	25-04516
231071	227BRCKS	448	94	448	S	W	P	25-11815
231072	227BRCKS	560	74	560	S	W	P	25-03970
231079	227BRCKS	230	50	230	S	W	N	25-23677
231080	227BRCKS	200	50	200	S	W	J	--
231165	227PSSC	200	50	200	S	O	U	25-33677-1
231183	227PSSC	75	55	75	P	O	U	25-32278
231184	227PSSC	27	7	27	P	O	U	25-32276
231185	227PSSC	27	7	27	P	O	U	25-32279
231186	227PSSC	27	7	27	P	O	U	25-32277
231187	227PSSC	16	14	16	P	O	U	--
231188	227PSSC	11.6	9.6	11.6	P	O	U	--
231189	227PSSC	8	5	8	P	O	U	--
231190	227PSSC	4	2	4	P	O	U	--
231191	227PSSC	15	14	15	P	O	U	--
231192	227PSSC	6	5	6	P	O	U	--
231194	227PSSC	566	--	--	S	T	U	--
			37.58	566	S			25-13518
231195	227PSSC	350	90	350	-	W	P	25-13248
231201	227BRCKS	500	--	--	S	W	P	--
			50.9	500	S			25-11823
231202	227BRCKS	504	--	--	S	W	P	--

P.3

NEW JERSEY UNIQUE NUMBER	SITE-ID	LOCAL WELL NUMBER	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	LAT/LONG DATUM (CODE)	COUNTY	TOWNSHIP
231202	403459074244201	SPRING LAKE 6	403459	0742442	NAD27	023	SOUTH PLAINFIELD BORO
231203	403500074244001	SPRING LAKE 8	403500	0742440	NAD27	023	SOUTH PLAINFIELD BORO
231204	403505074243901	SPRING LAKE 9	403505	0742439	NAD27	023	SOUTH PLAINFIELD BORO
231205	403517074222301	TINGLEY SO 9	403517	0742223	NAD27	023	EDISON TWP
231206	403522074221501	TINGLEY SO 8	403522	0742215	NAD27	023	EDISON TWP
231207	403528074221501	TINGLEY SO 7	403528	0742215	NAD27	023	EDISON TWP
231208	403530074222801	TINGLEY NO 1	403530	0742228	NAD27	023	EDISON TWP
231209	403532074221501	TINGLEY SO 6	403532	0742215	NAD27	023	EDISON TWP
231210	403533074244101	PARK AVENUE 26	403533	0742441	NAD27	023	SOUTH PLAINFIELD BORO
231211	403539074235901	MAPLE & PARK AVES	403539	0742359	NAD27	023	SOUTH PLAINFIELD BORO
231212	403540074243201	PARK AVE 27	403540	0742432	NAD27	023	SOUTH PLAINFIELD BORO
231213	403540074243202	PARK AVE 18	403540	0742432	NAD27	023	SOUTH PLAINFIELD BORO
231214	403540074243203	PARK AVE 19	403540	0742432	NAD27	023	SOUTH PLAINFIELD BORO
231215	403551074242501	PARK AVE 23	403551	0742425	NAD27	023	SOUTH PLAINFIELD BORO
231216	403602074240401	SPRAGUE 1	403602	0742404	NAD27	023	SOUTH PLAINFIELD BORO
231217	403602074240801	SPRAGUE 2	403602	0742408	NAD27	023	SOUTH PLAINFIELD BORO
231218	403114074275101	CH-2MWB	403114	0742751	NAD27	023	PISCATAWAY TWP
231219	403114074275102	CH-2MWA	403114	0742751	NAD27	023	PISCATAWAY TWP
231220	403114074275103	CH-2/SEALED	403114	0742751	NAD27	023	PISCATAWAY TWP
231221	403115074274601	CH-1MW	403115	0742746	NAD27	023	PISCATAWAY TWP
231222	403115074274602	CH-1/SEALED	403115	0742746	NAD27	023	PISCATAWAY TWP
231223	403115074280101	MW-2A	403115	0742801	NAD27	023	PISCATAWAY TWP
231224	403115074280102	MW-2B	403115	0742801	NAD27	023	PISCATAWAY TWP
231225	403115074280103	MW-2C	403115	0742801	NAD27	023	PISCATAWAY TWP
231226	403117074274801	MW-1A	403117	0742748	NAD27	023	PISCATAWAY TWP
231227	403117074274802	MW-1B	403117	0742748	NAD27	023	PISCATAWAY TWP
231228	403117074274803	MW-1C	403117	0742748	NAD27	023	PISCATAWAY TWP
231229	403117074275301	MW-3A	403117	0742753	NAD27	023	PISCATAWAY TWP
231230	403117074275302	MW-3B	403117	0742753	NAD27	023	PISCATAWAY TWP

P. 4

NEW JERSEY UNIQUE NUMBER	AQUIFER CODE	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)	CASING MATERIAL	PRIMARY USE OF SITE	PRIMARY USE OF WATER	NEW JERSEY PERMIT NUMBER
231202	227BRCKS	504	58	504	S	W	P	25-11828
231203	227BRCKS	501	--	--	S	W	P	--
			53.3	501	S			25-12364
231204	227BRCKS	500	--	--	S	W	P	--
			85.25	500	S			25-12365
231205	227BRCKS	700	32.7	700	S	W	P	25-05965
231206	227BRCKS	629	50	629	S	W	P	25-05637
231207	227BRCKS	608	45	608	S	W	P	25-05432
231208	227BRCKS	402	54	402	S	W	P	25-00408
231209	227BRCKS	540	--	--	S	W	P	25-04517
231210	227BRCKS	495	--	--	S	W	P	--
			67.25	495	S			25-11816
231211	227BRCKS	351	97.75	351	S	W	P	25-10001
231212	227BRCKS	501	--	--	S	W	P	--
			104.75	501	S			25-11822
231213	112SFDF	73.9	--	--	-	W	P	--
			54.9	73.9	S			45-00274
231214	112SFDF	78.1	--	--	S	W	P	--
			56.8	76.1	S			45-00275
231215	112SFDF	76	58.4	76	S	W	P	25-09763
231216	112SFDF	100.5	--	--	S	W	P	--
			80.5	100.5	S			25-09603
231217	112SFDF	151	92	104	S	W	P	25-11464
			104	108	S			--
			146	151	S			--
231218	227PSSC	40	30	40	S	O	U	25-43063
231219	227PSSC	90	70	90	S	O	U	25-43061
231220	227PSSC	100	10	100	-	Z	U	25-43050
231221	227PSSC	40	30	40	S	O	U	25-43053
231222	227PSSC	110	15	110	-	Z	U	25-43049
231223	227PSSC	170	150	170	S	O	U	25-43056
231224	227PSSC	110	90	110	S	O	U	25-43057
231225	227PSSC	80	60	80	S	O	U	25-43058
231226	227PSSC	100	--	--	S	O	U	--
			80	100	S			25-43047
231227	227PSSC	140	--	--	S	O	U	--
			120	140	S			25-43054
231228	227PSSC	40	30	40	S	O	U	25-43055
231229	227PSSC	140	120	140	S	O	U	25-43059
231230	227PSSC	90	70	90	S	O	U	25-43060

p.5

NEW JERSEY UNIQUE NUMBER	SITE-ID	LOCAL WELL NUMBER	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	LAT/LONG DATUM (CODE)	COUNTY	TOWNSHIP
231231	403121074274201	RUTGERS MW-4	403121	0742742	NAD27	023	PISCATAWAY TWP
231232	403123074274601	CH-3MW	403123	0742746	NAD27	023	PISCATAWAY TWP
231233	403123074274602	CH-3/SEALED	403123	0742746	NAD27	023	PISCATAWAY TWP
231235	403039074245601	SUTTONS LN OW 8	403039	0742456	NAD27	023	EDISON TWP
231236	403124074233601	OW 7	403124	0742336	NAD27	023	EDISON TWP
231237	403528074223001	MIDDLESEX WC OW 3	403528	0742230	NAD27	023	EDISON TWP
231238	403528074223002	TINGLEY 4	403528	0742230	NAD27	023	EDISON TWP
231239	403553074243301	PARK AVE 20	403553	0742433	NAD27	023	SOUTH PLAINFIELD BORO
231240	403553074243302	PARK AVE 21	403553	0742433	NAD27	023	SOUTH PLAINFIELD BORO
231241	403553074243303	PARK AVE 22	403553	0742433	NAD27	023	SOUTH PLAINFIELD BORO
231242	403553074243304	PARK AVE 24	403553	0742433	NAD27	023	SOUTH PLAINFIELD BORO
231243	403110074281202	GC-IRR PACKER 52-67	403110	0742812	NAD27	023	PISCATAWAY TWP
231244	403110074281203	GC-IRR PACKER 85-102	403110	0742812	NAD27	023	PISCATAWAY TWP
231245	403110074281204	GC-IRR PACKER 110-127	403110	0742812	NAD27	023	PISCATAWAY TWP
231246	403110074281205	GC-IRR PACKER 214-231	403110	0742812	NAD27	023	PISCATAWAY TWP
231247	403110074281206	GC-IRR PACKER 257-274	403110	0742812	NAD27	023	PISCATAWAY TWP
231248	403110074281207	GC-IRR PACKER 178-195	403110	0742812	NAD27	023	PISCATAWAY TWP
231258	403420074231301	LADCO 1	403420	0742313	NAD27	023	EDISON TWP
231259	403527074230001	PCC 2	403527	0742300	NAD27	023	EDISON TWP
231263	403107074280501	MW-7A	403107	0742805	NAD27	023	PISCATAWAY TWP
231264	403107074280502	MW-7B	403107	0742805	NAD27	023	PISCATAWAY TWP
231265	403111074280801	MW-6A	403111	0742808	NAD27	023	PISCATAWAY TWP
231266	403111074280802	MW-6B	403111	0742808	NAD27	023	PISCATAWAY TWP
231267	403111074280803	MW-6C	403111	0742808	NAD27	023	PISCATAWAY TWP
231268	403118074274304	MW-5A	403118	0742743	NAD27	023	PISCATAWAY TWP
231273	403448074261801	DESIGN&MOLDING 1	403448	0742618	NAD27	023	SOUTH PLAINFIELD BORO
231274	403348074301001	AIRCO R-1	403348	0743010	NAD27	023	MIDDLESEX BORO
231275	403150074234001	AMERCHOL 1	403150	0742340	NAD27	023	EDISON TWP
231276	403317074221401	METUCHEN CC 1	403317	0742214	NAD27	023	EDISON TWP
231277	403422074231701	LADCO 2	403422	0742317	NAD27	023	EDISON TWP
231278	403427074231501	LADCO IND AUX	403427	0742315	NAD27	023	EDISON TWP
231279	403538074225301	PCC 1	403538	0742253	NAD27	023	EDISON TWP
231281	403348074301002	AIRCO R-2	403348	0743010	NAD27	023	MIDDLESEX BORO
231282	403348074301003	AIRCO R-3	403348	0743010	NAD27	023	MIDDLESEX BORO

NEW JERSEY UNIQUE NUMBER	AQUIFER CODE	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)	CASING MATERIAL	PRIMARY USE OF SITE	PRIMARY USE OF WATER	NEW JERSEY PERMIT NUMBER
231231	227PSSC	30	20	30	S	O	U	25-43048
231232	227PSSC	160	140	160	S	O	U	25-43062
231233	227PSSC	220	10	220	-	Z	U	25-43051
231235	227PSSC	503	29.67	503	-	W	P	25-00358
231236	227PSSC	507	32.25	507	-	W	P	25-00332
231237	227PSSC	507	72.33	507	-	T	U	25-02008
231238	227PSSC	508	77.33	508	-	T	U	25-02009
231239	112SFDF	82	--	--	-	W	P	45-00276
231240	112SFDF	73	--	--	-	W	P	45-00277
231241	227PSSC	514	63.42	514	S	W	P	45-00278
231242	112SFDF	110	--	--	-	W	P	45-00279
231243	227PSSC	67	55	67	S	Z	U	25-21440.2
231244	227PSSC	102	--	--	P	Z	U	--
			85	102	S			25-21440.3
231245	227PSSC	127	--	--	P	Z	U	--
			110	127	S			25-21440.4
231246	227PSSC	231	--	--	P	Z	U	--
			214	231	S			25-21440.5
231247	227PSSC	274	--	--	P	Z	U	--
			257	274	S			25-21440.6
231248	227PSSC	195	--	--	P	Z	U	--
			178	195	S			25-21440.7
231258	227PSSC	750	--	--	-	W	J	45-00040
231259	227PSSC	205	--	--	-	W	I	45-00307
231263	227PSSC	136	110	136	S	O	U	25-47700
231264	227PSSC	90	65	90	S	O	U	25-47701
231265	227PSSC	265	239	265	S	O	U	25-47697
231266	227PSSC	215	190	215	S	O	U	25-47698
231267	227PSSC	100	75	100	S	O	U	25-47699
231268	227PSSC	204	--	--	S	O	U	--
			178	204	S			25-47695
231273	227PSSC	390	--	--	-	W	J	45-00252
231274	227PSSC	9.5	6.5	9.5	S	W	N	25-30486-1
231275	227PSSC	525	36.58	525	S	W	N	25-04515
231276	227PSSC	390	54	390	S	W	I	25-12005
231277	227PSSC	395	38	395	S	W	N	25-21275
231278	227PSSC	900	50	900	S	W	N	25-21034
231279	227PSSC	600	117.67	600	S	W	I	25-06839
231281	227PSSC	12.5	9.5	12.5	S	W	N	25-30487-9
231282	227PSSC	9	6	9	S	W	N	25-30488-7

P.7

NEW JERSEY UNIQUE NUMBER	SITE-ID	LOCAL WELL NUMBER	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	LAT/LONG DATUM (CODE)	COUNTY	TOWNSHIP
231283	403348074301004	AIRCO R-5	403348	0743010	NAD27	023	MIDDLESEX BORO
231284	403348074301005	AIRCO R-6	403348	0743010	NAD27	023	MIDDLESEX BORO
231285	403348074301006	AIRCO R-7	403348	0743010	NAD27	023	MIDDLESEX BORO
231286	403348074301007	AIRCO R-9	403348	0743010	NAD27	023	MIDDLESEX BORO
231287	403348074301008	AIRCO R-10	403348	0743010	NAD27	023	MIDDLESEX BORO
231288	403349074300901	AIRCO R-11	403349	0743009	NAD27	023	MIDDLESEX BORO
231289	403349074301001	AIRCO W-2	403349	0743010	NAD27	023	MIDDLESEX BORO
231290	403349074301101	AIRCO W-7	403349	0743011	NAD27	023	MIDDLESEX BORO
231291	403349074301201	AIRCO R-12	403349	0743012	NAD27	023	MIDDLESEX BORO
231309	403347074300901	AIRCO 2	403347	0743009	NAD27	023	PISCATAWAY TWP
231310	403453074282401	DESIGN&MOLDING 2	403453	0742824	NAD27	023	PISCATAWAY TWP
231313	403315074243301	TINGLEY 1-1960	403315	0742433	NAD27	023	SOUTH PLAINFIELD BORO
231314	403431074242701	KENTILE 3	403431	0742427	NAD27	023	SOUTH PLAINFIELD BORO
231315	403431074242702	KENTILE 2	403431	0742427	NAD27	023	SOUTH PLAINFIELD BORO
231328	403134074274301	RUTGERS MW-13	403134	0742743	NAD27	023	PISCATAWAY TWP
231329	403134074274801	RUTGERS MW-10	403134	0742748	NAD27	023	PISCATAWAY TWP
231330	403135074274401	RUTGERS MW-12A	403135	0742744	NAD27	023	PISCATAWAY TWP
231331	403135074274402	RUTGERS MW-12B	403135	0742744	NAD27	023	PISCATAWAY TWP
231332	403135074274403	RUTGERS MW-12C	403135	0742744	NAD27	023	PISCATAWAY TWP
231333	403135074274601	RUTGERS MW-1	403135	0742746	NAD27	023	PISCATAWAY TWP
231334	403137074274501	RUTGERS MW-8	403137	0742745	NAD27	023	PISCATAWAY TWP
231335	403138074273901	RUTGERS MW-11	403138	0742739	NAD27	023	PISCATAWAY TWP
231336	403139074274201	RUTGERS MW-9	403139	0742742	NAD27	023	PISCATAWAY TWP
350013	403613074273401	ROCK AVE-GREEN BROOK	403613	0742734	NAD27	035	GREEN BROOK TWP
350030	403600074275601	GREEN BROOK 1	403600	0742756	NAD27	035	GREEN BROOK TWP
350032	403559074281801	GREEN BROOK 11	403559	0742818	NAD27	035	GREEN BROOK TWP
350037	403640074265301	N PLAINFIELD BD OF ED	403640	0742653	NAD27	035	NORTH PLAINFIELD BORO
350071	403557074275501	GREEN BROOK 2	403557	0742755	NAD27	035	GREEN BROOK TWP
350072	403559074281301	PUWC 2	403559	0742813	NAD27	035	GREEN BROOK TWP
350073	403600074275901	PUWC 5	403600	0742759	NAD27	035	GREEN BROOK TWP
350074	403600074281301	PUWC 6	403600	0742813	NAD27	035	GREEN BROOK TWP
350075	403602074280701	PUWC 1	403602	0742807	NAD27	035	GREEN BROOK TWP
350076	403603074280601	PUWC 7	403603	0742806	NAD27	035	GREEN BROOK TWP
350077	403700074261601	ROCKVIEW AVE	403700	0742616	NAD27	035	NORTH PLAINFIELD BORO
350078	403708074262201	ROCKVIEW TERRACE	403708	0742622	NAD27	035	NORTH PLAINFIELD BORO
350082	403557074275502	EWC - GREENBROOK 3	403557	0742755	NAD27	035	GREEN BROOK TWP
350083	403557074275503	GREEN BROOK 4	403557	0742755	NAD27	035	GREEN BROOK TWP

D 28

NEW JERSEY UNIQUE NUMBER	AQUIFER CODE	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)	CASING MATERIAL	PRIMARY USE OF SITE	PRIMARY USE OF WATER	NEW JERSEY PERMIT NUMBER
231283	227PSSC	8.5	5.5	8.5	S	W	N	25-30490-9
231284	227PSSC	12	9	12	S	W	N	25-30491-7
231285	227PSSC	11.5	8.5	11.5	S	W	N	25-30492-5
231286	227PSSC	11.5	8.5	11.5	S	W	N	25-30494-1
231287	227PSSC	12	9	12	S	W	N	25-30495-0
231288	227PSSC	12	1.5	12	P	W	Z	25-34466
231289	227PSSC	85	23	85	S	O	N	25-26293
231290	227PSSC	85	21	85	S	O	N	25-26298
231291	227PSSC	12	2	12	P	O	N	25-40850
231309	227PSSC	404	34.08	404	S	W	N	25-03866
231310	227PSSC	450	60	450	S	W	N	25-22656
231313	227PSSC	428	31.67	428	S	W	N	25-09733
231314	227PSSC	174	34	174	S	W	N	25-00846
231315	227PSSC	240	33.5	240	S	W	N	25-00845
231328	227PSSC	30	15	30	P	O	U	25-52626
231329	227PSSC	30	15	30	P	O	U	25-52621
231330	227PSSC	80	--	--	S	O	U	--
			60	80	S			25-52624
231331	227PSSC	50	30	50	S	O	U	25-52625
231332	227PSSC	25	10	25	P	O	U	25-52623
231333	227PSSC	20	5	20	P	O	U	25-46053
231334	227PSSC	30	15	30	P	O	U	25-52627
231335	227PSSC	30	15	30	P	O	U	25-52622
231336	227PSSC	25	10	25	P	O	U	25-52620
350013	227BRCKS	350	42	350	S	W	P	25-12665
350030	227BRCKS	451	34	451	S	W	P	45-00023
350032	231SCKN	433	45.25	433	S	W	P	25-02717
350037	227BRCKS	300	--	--	S	W	P	--
			40	300	S			45-00022
350071	227PSSC	376	--	--	-	W	P	45-00024
350072	227PSSC	507	70.33	507	-	W	P	25-02716
350073	227PSSC	454	73.75	454	-	W	P	25-00572
350074	227PSSC	473	35	473	-	W	P	25-00632
350075	227PSSC	445	61.25	445	-	W	P	25-02715
350076	227PSSC	545	37.5	545	-	W	P	25-00633
350077	227PSSC	220	--	--	-	W	P	--
			64	220	-			25-13898
350078	227PSSC	400	40	400	-	W	P	25-13106
350082	227PSSC	550	--	--	-	W	P	45-00025
350083	227PSSC	400	53	400	-	W	P	45-00026

p.9

NEW JERSEY UNIQUE NUMBER	SITE-ID	LOCAL WELL NUMBER	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	LAT/LONG DATUM (CODE)	COUNTY	TOWNSHIP
350117	403606074282801	PUWC 4/SEALED	403606	0742828	NAD27	035	GREEN BROOK TWP
390186	403546074272301	NATIONAL 2	403546	0742723	NAD27	039	PLAINFIELD CITY
390187	403548074271801	NATIONAL 1	403548	0742718	NAD27	039	PLAINFIELD CITY
390188	403550074271601	NATIONAL 6	403550	0742716	NAD27	039	PLAINFIELD CITY
390189	403554074262801	FIFTH ST WELL	403554	0742628	NAD27	039	PLAINFIELD CITY
390190	403600074265601	INT MOTOR 2	403600	0742656	NAD27	039	PLAINFIELD CITY
390191	403625074241701	MUHLENBERG 3	403625	0742417	NAD27	039	PLAINFIELD CITY
390192	403634074252401	TAUB 1	403634	0742524	NAD27	039	PLAINFIELD CITY
390193	403643074244201	OKUN 1	403643	0742442	NAD27	039	PLAINFIELD CITY
390194	403652074250801	SAFEWAY STRS 1-303FT	403652	0742508	NAD27	039	PLAINFIELD CITY
390195	403654074251401	QUEEN CITY 1	403654	0742514	NAD27	039	PLAINFIELD CITY
390197	403705074253201	TEPPER 1	403705	0742532	NAD27	039	PLAINFIELD CITY
390199	403711074251501	ROSENBAUM 1	403711	0742515	NAD27	039	PLAINFIELD CITY
390200	403716074251801	SUPPLY WELL 1	403716	0742518	NAD27	039	PLAINFIELD CITY
390201	403716074251802	BAMBERGER 4	403716	0742518	NAD27	039	PLAINFIELD CITY
390202	403716074251803	BAMBERGER 3	403716	0742518	NAD27	039	PLAINFIELD CITY
390203	403716074251804	BAMBERGER 7	403716	0742518	NAD27	039	PLAINFIELD CITY
390204	403716074251805	BAMBERGER 6	403716	0742518	NAD27	039	PLAINFIELD CITY
390205	403717074252101	RECHARGE 2	403717	0742521	NAD27	039	PLAINFIELD CITY
390206	403718074252101	RECHARGE 1	403718	0742521	NAD27	039	PLAINFIELD CITY
390207	403718074252102	BAMBERGER A	403718	0742521	NAD27	039	PLAINFIELD CITY
390208	403719074252301	BAMBERGER B	403719	0742523	NAD27	039	PLAINFIELD CITY
390264	403617074223001	DOUGHERTY	403617	0742230	NAD27	039	SCOTCH PLAINS TWP
390265	403620074225001	HICKS 1	403620	0742250	NAD27	039	SCOTCH PLAINS TWP
390389	403615074265501	PLAINFIELD CITY	403615	0742655	NAD27	039	PLAINFIELD CITY

NEW JERSEY UNIQUE NUMBER	AQUIFER CODE	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)	CASING MATERIAL	PRIMARY USE OF SITE	PRIMARY USE OF WATER	NEW JERSEY PERMIT NUMBER
350117	227PSSC	510	56	510	S	Z	P	25-02718
390186	227BRCKS	304	66.00	304.00	-	W	N	45-00313
390187	227BRCKS	304	65.00	304.00	-	W	N	45-00312
390188	227BRCKS	436	72.00	436.00	-	W	N	25-11751
390189	227BRCKS	350	84.00	350.00	-	W	P	25-12961
390190	227BRCKS	600	67.00	600.00	-	W	N	25-00091
390191	227BRCKS	502	54.00	502.00	-	W	-	25-10488
390192	227BRCKS	200	63.00	200.00	-	W	A	25-02545
390193	227BRCKS	130	83.00	130.00	-	W	H	25-02218
390194	227BRCKS	303	44.00	303.00	-	W	A	25-00876
390195	227BRCKS	310	53.00	310.00	-	U	U	25-00400
390197	227BRCKS	427	42.00	427.00	-	W	N	--
390199	227BRCKS	301	45.00	301.00	-	W	A	25-00606
390200	227BRCKS	501	53.00	501.00	-	W	C	25-01922
390201	227BRCKS	37.0	31.00	37.00	-	T	U	25-02902
390202	227BRCKS	44.0	40.00	44.00	-	T	U	25-02957
390203	227BRCKS	34.0	31.00	34.00	-	T	U	25-02956
390204	227BRCKS	43.0	39.00	43.00	-	T	U	25-02955
390205	112SFDF	44.0	23.00	44.00	-	R	-	25-02903
390206	112SFDF	34.0	17.00	34.00	-	R	-	25-02592
390207	112SFDF	43.0	36.00	43.00	-	O	U	25-02661
390208	227BRCKS	44.0	34.00	44.00	-	O	U	25-02660
390264	227BRCKS	156	98.00	156.00	-	W	H	25-05397
390265	227BRCKS	103	68.00	103.00	-	W	H	25-02453
390389	227PSSC	499	--	--	-	W	P	45-00027

Lat-Long Accuracy (c11)
- S - seconds
- F - 5 seconds
- T - 10 seconds
- M - minutes

Primary Use of Water (c24)
- A - air cond.
- B - bottling
- ✓C - commercial
- D - dewater
- E - power
- F - fire
- ✓H - domestic
- I - irrigation
- J - industrial (cooling)
- K - mining
- M - medicinal
- N - industrial
- P - public supply
- Q - aqua-culture
- R - recreation
- ✓S - stock
- T - institutional
- U - unused
- Y - desalination
- Z - other

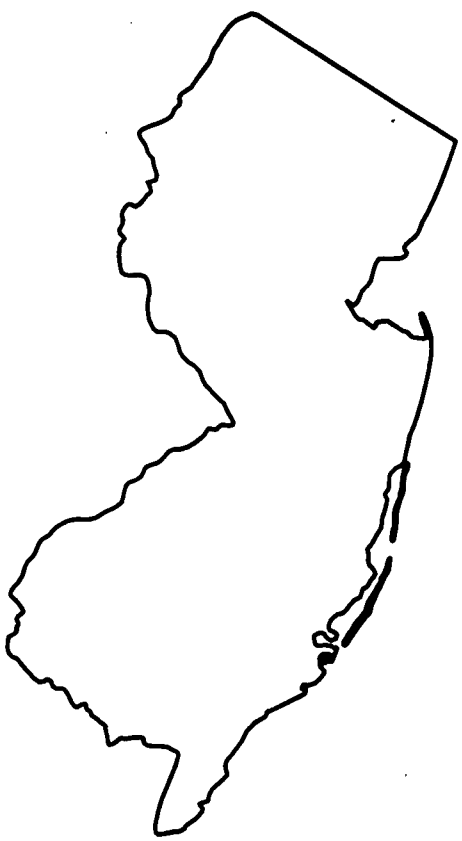
Type of analyses (c120)
- A - physical properties
- B - common ions
- C - trace elements
- D - pesticides
- E - nutrients
- F - sanitary elements
- G - codes B&D
- H - codes B&E
- I - codes B&C
- J - codes B&F
- K - codes D&E
- L - codes C,D&E
- M - all or most
- N - codes B&C&radio active
- P - codes BC&A
- Z - other

REFERENCE 33

Water Resources Data
New Jersey
Water Year 1996

Volume 1. Surface-Water Data

by T.J. Reed, G.L. Centinaro, M.J. DeLuca, J.T. Hutchinson, and J. Scudder



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NJ-96-1
Prepared in cooperation with the New Jersey Department
of Environmental Protection and with other agencies

p. 1

UNITED STATES DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, *Secretary*

GEOLOGICAL SURVEY

Gordon P. Eaton, *Director*

For information on the water program in New Jersey write to

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U.S. Geological Survey
Mountain View Office Park
810 Bear Tavern Road, Suite 206
West Trenton, New Jersey 08628

1997

p.2

01403900 BOUND BROOK AT MIDDLESEX, NJ

LOCATION.--Lat 40°35'06", long 74°30'29", Somerset County, Hydrologic Unit 02030105, at bridge on Sebring Mill Road, 0.4 mi downstream of mouth of Green Brook, and 2.3 mi upstream of mouth.

DRAINAGE AREA.--48.4 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to October 1977, April 1996 to September 1996. Operated as a crest-stage water years 1992-95.

GAGE.--Water-stage recorder. Datum of gage is 26.52 ft above sea level.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Water diverted from Baltusrol well field by New Jersey-American Water Company, for municipal supply and from private and industrial wells in Plainfield and vicinity.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	130	19	63	296	14
2	---	---	---	---	---	---	---	50	18	22	73	13
3	---	---	---	---	---	---	---	74	119	22	33	13
4	---	---	---	---	---	---	---	86	e155	29	25	12
5	---	---	---	---	---	---	---	48	e44	19	48	12
6	---	---	---	---	---	---	---	86	e25	17	24	21
7	---	---	---	---	---	---	---	59	21	15	22	40
8	---	---	---	---	---	---	---	e104	20	96	21	189
9	---	---	---	---	---	---	92	e62	19	227	26	330
10	---	---	---	---	---	---	201	44	18	35	56	127
11	---	---	---	---	---	---	120	62	39	23	22	72
12	---	---	---	---	---	---	74	252	78	20	20	41
13	---	---	---	---	---	---	64	74	72	e597	145	64
14	---	---	---	---	---	---	57	54	24	e270	65	113
15	---	---	---	---	---	---	53	46	20	e191	27	21
16	---	---	---	---	---	---	684	82	18	224	22	13
17	---	---	---	---	---	---	250	87	16	82	21	249
18	---	---	---	---	---	---	104	56	17	41	19	417
19	---	---	---	---	---	---	76	47	160	98	18	126
20	---	---	---	---	---	---	67	44	93	121	18	42
21	---	---	---	---	---	---	61	36	29	40	19	26
22	---	---	---	---	---	---	54	33	23	32	20	62
23	---	---	---	---	---	---	54	29	24	31	18	56
24	---	---	---	---	---	---	72	29	19	30	25	34
25	---	---	---	---	---	---	42	26	19	27	19	33
26	---	---	---	---	---	---	37	23	17	50	17	26
27	---	---	---	---	---	---	39	27	16	32	16	22
28	---	---	---	---	---	---	29	25	15	25	16	25
29	---	---	---	---	---	---	49	23	15	24	15	119
30	---	---	---	---	---	---	148	22	117	24	15	44
31	---	---	---	---	---	---	---	21	---	377	14	---
TOTAL	---	---	---	---	---	---	---	1841	1289	2904	1195	2376
MEAN	---	---	---	---	---	---	---	59.4	43.0	93.7	38.5	79.2
MAX	---	---	---	---	---	---	---	252	160	597	296	417
MIN	---	---	---	---	---	---	---	21	15	15	14	12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1996, BY WATER YEAR (WY)

MEAN	54.8	58.6	102	80.3	91.8	91.3	98.8	71.8	54.0	76.5	63.0	60.4
MAX	94.5	125	164	112	170	110	178	146	128	263	258	198
(WY)	1976	1973	1974	1975	1973	1977	1973	1975	1975	1975	1973	1975
MIN	21.7	17.4	30.6	16.5	41.7	57.6	58.0	27.3	22.8	9.45	13.0	8.75
(WY)	1973	1977	1977	1977	1974	1976	1976	1977	1974	1974	1972	1972

p.3

01403900 BOUND BROOK AT MIDDLESEX, NJ--Continued

SUMMARY STATISTICS	WATER YEARS 1972 - 1996		
ANNUAL MEAN	77.1c		
HIGHEST ANNUAL MEAN	112c		1973
LOWEST ANNUAL MEAN	40.3c		1977
HIGHEST DAILY MEAN	2990c	Aug 3	1973
LOWEST DAILY MEAN	2.5c	Jul 21	1974
INSTANTANEOUS PEAK FLOW	7000b	Aug 2	1973
INSTANTANEOUS PEAK STAGE	41.18ab	Aug 2	1973
INSTANTANEOUS LOW FLOW	2.5c	Jul 21	1974

a Gage height (NGVD 1929) from previous site location approximately 150 ft upstream from current site.
b Water years 1972-77, 1992-96.
c Water years 1972-77.
e Estimated.

p.4

01403400 GREEN BROOK AT SEELEY MILLS, NJ

LOCATION.--Lat 40°39'53", long 74°24'10", Somerset County, Hydrologic Unit 02030105, on right bank at Seeley Mills, 250 ft downstream from Blue Brook, 300 ft downstream from bridge on Diamond Hill Road, and 0.5 mi northwest of Scotch Plains.

DRAINAGE AREA.--6.23 mi^2.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1959-64, 1969: annual maximum, water years 1969-79. June 1979 to current year. Fragmentary records 1944-53 in the files of the Geological Survey. Crest-stage data 1927-38, 1958-68 in files of Union County Park Commission.

REVISED RECORDS.--WDR-NJ 81-1: 1979(M). WDR-NJ 87-1: 1971(M), 1973(M), 1975(M).

GAGE.--Water-stage recorder. Datum of gage is 184.44 ft above sea level. From 1944 to 1953, water-stage recorder and masonry dam about 400 ft downstream above lower Seeley Mills dam at different datum. From July 1969 to May 1979, crest-stage gage about 450 ft downstream below lower Seeley Mills dam (washed out May 29, 1968) at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. Rain-gage and gage-height radio telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 23, 1938 reached an elevation of 196.5 ft, New Jersey Geological Survey datum, above lower Seeley Mills dam, discharge, 5,840 ft^3/s, computed by State Water Policy Commission.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 28	0500	531	3.72	Apr. 1	2245	257	2.80
Jan. 19	1600	*726	*4.27	Apr. 16	0900	257	2.80
Mar. 19	2245	453	3.48				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	4.7	4.6	e2.9	e12	7.8	38	18	3.9	4.2	4.7	2.8
2	1.5	42	5.1	e4.7	e11	8.2	57	e6.7	3.7	3.4	3.7	2.8
3	1.4	9.9	5.1	e5.9	e9.6	8.2	18	e11	17	3.8	3.7	2.8
4	1.5	3.9	4.7	e3.8	e8.5	7.5	e12	e7.9	8.2	3.7	3.6	2.8
5	25	2.6	3.9	e2.9	e6.4	13	e10	e6.0	7.8	3.4	3.5	2.8
6	17	2.2	5.6	e2.4	e8.2	38	e12	14	4.4	3.3	3.3	3.8
7	2.2	e13	4.7	e2.2	e7.3	37	20	e11	3.9	3.2	3.3	3.7
8	1.9	e12	4.0	e2.5	e7.8	21	28	15	3.7	12	3.3	23
9	1.8	e4.1	4.3	e4.1	e16	13	23	13	3.7	5.0	3.4	3.8
10	1.8	e4.0	5.3	e3.7	e13	11	38	e8.8	4.2	3.4	3.2	2.8
11	1.8	e13	5.0	e3.4	e12	11	18	22	11	3.3	3.1	2.8
12	1.8	e107	4.2	e3.9	e9.7	13	14	29	5.9	3.3	3.1	2.8
13	1.8	e15	3.7	e6.4	e6.8	16	13	e7.3	7.3	83	8.2	7.8
14	10	e42	3.5	e4.9	e7.9	16	e10	e5.2	4.2	13	3.3	4.7
15	13	e65	4.0	e5.0	5.7	16	e9.0	e5.2	4.0	11	3.1	2.9
16	2.3	e16	e7.4	e4.1	4.1	14	118	18	3.5	7.4	3.1	2.8
17	1.9	e12	e5.0	e5.1	3.8	11	27	15	3.5	4.6	3.1	64
18	1.8	e7.6	e4.0	e6.2	5.3	10	16	13	3.6	4.1	3.1	42
19	1.8	e10	e3.7	e229	4.5	45	13	e7.3	14	10	2.9	6.6
20	2.0	e5.6	e3.3	e79	8.3	59	e9.5	e6.2	5.5	6.4	2.9	3.6
21	37	e4.8	e3.4	e20	34	20	e8.2	e5.2	4.0	5.4	3.0	2.9
22	5.8	e4.2	e3.6	e15	19	15	e7.6	5.0	3.6	5.5	3.0	6.2
23	2.4	e4.2	e3.4	e11	14	13	e8.1	4.8	3.7	5.7	4.7	4.4
24	2.0	e5.5	e3.3	e58	21	11	e9.2	4.5	3.5	4.4	4.1	3.9
25	2.1	e3.4	e3.1	e32	11	11	e6.4	4.2	3.5	4.0	2.9	3.7
26	2.1	e3.3	e3.3	e15	9.2	9.8	e6.2	4.2	3.3	5.3	2.9	3.1
27	3.5	e3.0	e2.9	e186	8.6	8.7	e5.7	4.5	3.3	3.5	2.9	2.9
28	102	e3.1	e3.0	e62	9.1	8.7	e5.5	4.2	3.1	3.3	2.9	3.2
29	7.0	e4.0	e2.9	e23	8.3	24	14	4.2	3.1	3.3	2.9	10
30	3.7	4.5	e2.8	e20	---	18	28	4.1	11	3.3	2.8	3.5
31	3.3	---	e3.0	e17	---	13	---	4.0	---	21	2.8	---
TOTAL	264.7	431.6	125.8	841.1	302.1	527.9	602.4	288.5	165.1	256.2	106.5	234.9
MEAN	8.54	14.4	4.06	27.1	10.4	17.0	20.1	9.31	5.50	8.26	3.44	7.83
MAX	102	107	7.4	229	34	59	118	29	17	83	8.2	64
MIN	1.4	2.2	2.8	2.2	3.8	7.5	5.5	4.0	3.1	3.2	2.8	2.8
CFSM	1.37	2.31	.65	4.36	1.67	2.73	3.22	1.49	.88	1.33	.55	1.26
IN.	1.58	2.58	.75	5.02	1.80	3.15	3.60	1.72	.99	1.53	.64	1.40

p.5

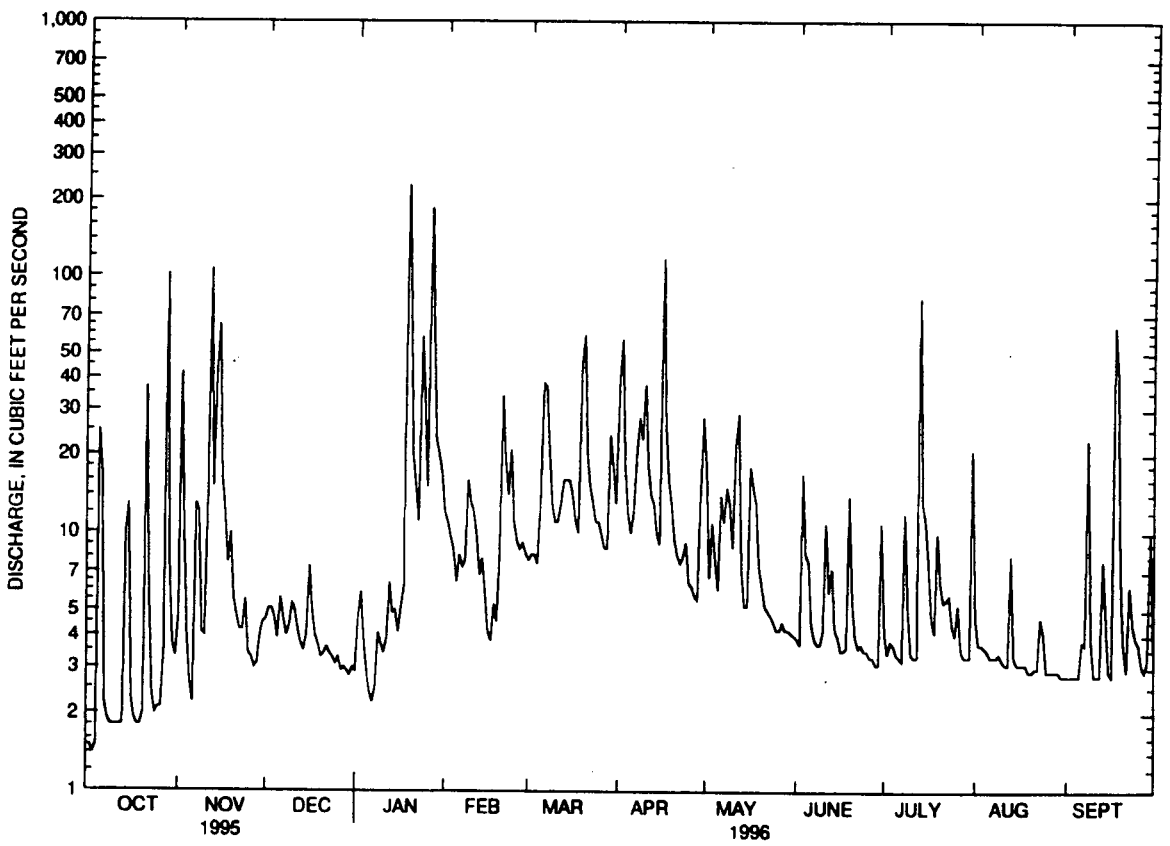
01403400 GREEN BROOK AT SEELEY MILLS, NJ--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1996, BY WATER YEAR (WY)

MEAN	6.50	10.4	11.7	12.1	11.4	17.6	18.7	13.1	7.43	6.87	4.84	5.73
MAX	22.8	22.4	46.9	27.1	20.9	40.9	41.1	42.0	23.3	18.9	16.1	24.6
(WY)	1990	1986	1984	1996	1984	1994	1983	1989	1992	1984	1990	1989
MIN	1.21	2.04	2.57	1.67	2.95	5.11	3.50	4.48	2.74	1.68	1.33	1.68
(WY)	1995	1982	1981	1981	1980	1985	1985	1986	1981	1993	1981	1994

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1979 - 1996		
ANNUAL TOTAL	2589.7		4146.8				
ANNUAL MEAN	7.10		11.3		10.5		
HIGHEST ANNUAL MEAN					18.2		1984
LOWEST ANNUAL MEAN					5.16		1981
HIGHEST DAILY MEAN	107	Nov 12	229	Jan 19	407	Apr 5	1984
LOWEST DAILY MEAN	1.2	Sep 11	1.4	Oct 3	.00	Sep 11	1981
ANNUAL SEVEN-DAY MINIMUM	1.4	Sep 10	1.9	Oct 7	.05	Sep 24	1981
INSTANTANEOUS PEAK FLOW			726	Jan 19	6240a	Aug 2	1973
INSTANTANEOUS PEAK STAGE			4.27	Jan 19	16.10b	Aug 2	1973
INSTANTANEOUS LOW FLOW			1.1	Oct 27	.00	Sep 11	1981
ANNUAL RUNOFF (CFSM)	1.14		1.82		1.69		
ANNUAL RUNOFF (INCHES)	15.46		24.76		22.95		
10 PERCENT EXCEEDS	13		21		20		
50 PERCENT EXCEEDS	3.9		5.0		5.1		
90 PERCENT EXCEEDS	1.8		2.8		1.6		

a From rating curve extended above 600 ft^3/s on basis of slope-area measurement of peak flow.
b Site and datum then in use.
e Estimated.



—— 01403400 GREEN BROOK AT SEELEY MILLS, NJ, DAILY MEAN DISCHARGE

p. 6

01403300 RARITAN RIVER AT QUEENS BRIDGE AT BOUND BROOK, NJ

LOCATION.--Lat 40°33'34", long 74°31'41", Somerset County, Hydrologic Unit 02030105, at Queens Bridge on Main street in Bound Brook, 1.7 mi upstream of Fieldsville Dam.

DRAINAGE AREA.--804 mi^2.

PERIOD OF RECORD.--Water years 1964-69, 1971-73, 1978, 1981 to current year. Published as "at Bound Brook" (station 01403000) 1964-66, and as "below Calco Dam at Bound Brook" (station 01403060) 1967-69.

REMARKS.--Instantaneous discharges are determined at Raritan River below Calco Dam at Bound Brook (station 01403060).

COOPERATION.--Some field data and samples for laboratory analyses provided by staff of the New Jersey Department of Environmental Protection. Analyses of fecal coliform bacteria by the MPN method, enterococcus bacteria by the membrane filtration method, and BOD performed by the New Jersey Department of Health, Public Health, and Environmental Laboratories. Some samples were collected by USGS personnel for the Long Island-New Jersey Coastal Plain NAWQA study.

WATER QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	COLI-FORM, FECAL, EC BROTH (MPN) (31615)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML) (31649)
NOV 1995												
01...	1130	798	233	7.4	--	12.0	767	10.4	96	<1.0	330	100
JAN 1996												
23...	1300	2580	279	7.7	--	2.0	760	13.4	97	<1.0	230	180
MAR												
28...	1230	866	303	--	--	7.5	770	--	--	2.9	<20	20
MAY												
08...	1210	2030	239	7.9	12.0	13.5	766	10.3	98	--	--	--
22...	1040	761	268	7.7	30.0	24.0	755	6.6	79	--	--	--
JUN												
10...	1130	334	350	7.3	--	24.0	764	6.5	77	2.8	220	90
13...	1000	2080	271	7.4	28.0	23.0	757	6.1	72	--	--	--
JUL												
09...	1100	1160	248	7.5	26.0	25.0	750	6.7	83	--	--	--
25...	1130	474	287	7.9	--	22.5	760	9.9	115	E1.2	1100	10
AUG												
06...	1110	566	250	7.6	32.0	25.5	766	8.6	104	--	--	--
SEP												
19...	1020	1260	205	7.6	20.0	18.0	756	8.4	90	--	--	--

Mean 1173.5

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
NOV 1995											
01...	73	18	6.8	14	2.7	--	41	--	24	21	0.1
JAN 1996											
23...	68	17	6.3	22	2.1	--	32	--	17	43	0.1
MAR											
28...	88	22	8.0	21	1.7	--	49	--	25	39	<0.1
MAY											
08...	69	17	6.5	17	1.9	51	43	42	20	29	0.1
22...	77	19	7.2	18	2.3	59	55	48	24	30	0.1
JUN											
10...	100	26	9.4	25	3.2	--	59	--	36	39	0.2
13...	75	18	7.4	19	3.9	53	42	44	25	30	0.2
JUL											
09...	75	19	6.6	15	3.0	56	46	46	22	25	0.2
25...	88	22	8.1	19	2.6	--	58	--	25	30	0.1
AUG											
06...	73	18	6.9	16	2.6	55	48	45	24	24	0.1
SEP											
19...	63	16	5.7	13	2.9	49	40	40	18	19	0.1

p.7

01403300 RARITAN RIVER AT QUEENS BRIDGE AT BOUND BROOK, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) (00689)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
NOV 1995											
01...	12	136	134	<1	--	--	--	4.1	0.3	--	--
JAN 1996											
23...	11	152	148	12	--	--	--	3.0	0.3	--	--
MAR											
28...	8.0	178	161	4	--	--	--	2.5	0.6	--	--
MAY											
08...	8.9	149	131	--	40	140	45	3.4	1.1	13	71
22...	8.5	173	145	--	60	86	170	3.1	2.7	36	74
JUN											
10...	7.9	--	195	15	--	--	--	3.4	0.4	--	--
13...	6.7	159	148	--	60	25	17	4.4	--	269	1510
JUL											
09...	7.0	142	133	--	70	59	19	4.1	1.4	127	396
25...	12	180	162	3	--	--	--	3.2	0.4	--	--
AUG											
06...	11	147	139	--	60	180	40	3.8	0.6	6	9.3
SEP											
19...	8.8	121	115	--	60	66	32	4.7	1.3	31	104

DATE	TIME	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	ARSENIC TOTAL (UG/L AS AS) (01002)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	BORON, TOTAL RECOV-ERABLE (UG/L AS B) (01022)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)
NOV 1995								
01...	1130	17	<1	<10	60	<1	<1	2
JUN 1996								
10...	1130	11	1	<10	100	<1	<1	4

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
NOV 1995							
01...	260	<1	50	<0.1	1	<1	<10
JUN 1996							
10...	290	<1	80	<0.1	2	<1	<10

The following analysis is a quality assurance sample processed during the 1996 water year and is defined in the explanation of records section entitled, "Water Quality-Control Data."

DATE	TIME	QUALITY ASSURANCE SAMPLE (TYPE)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)
AUG 1996							
06...	1000	FIELD BLANK	<0.02	<0.01	<0.20	<0.10	1.3

DATE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
AUG 1996								
06...	<0.10	<0.10	<0.10	<0.01	<1	<4	<3	<1

p.8

01403300 RARITAN RIVER AT QUEENS BRIDGE AT BOUND BROOK, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

WATER COLUMN NUTRIENT ANALYSES PERFORMED BY THE U.S. GEOLOGICAL SURVEY NATIONAL WATER QUALITY LABORATORY

DATE	TIME	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, TOTAL (MG/L AS N) (00600)	NITROGEN DISSOLVED (MG/L AS N) (00602)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)
NOV 1995											
01...	1130	--	2.50	--	0.40	0.41	2.9	2.9	0.13	0.11	--
JAN 1996											
23...	1300	--	2.30	--	0.30	0.15	2.6	2.5	0.07	0.04	--
MAR											
28...	1230	--	1.50	--	0.30	0.21	1.8	1.7	0.08	0.05	--
MAY											
08...	1210	0.01	1.20	0.03	0.50	0.40	1.7	1.6	0.11	0.09	0.06
22...	1040	0.03	1.40	<0.015	0.60	0.40	2.0	1.8	0.17	0.05	0.02
JUN											
10...	1130	--	2.80	--	0.70	0.64	3.5	3.4	0.41	0.35	--
13...	1000	0.06	2.50	0.13	1.5	0.50	4.0	3.0	0.64	0.23	0.21
JUL											
09...	1100	0.03	1.60	0.09	0.90	0.30	2.5	1.9	0.29	0.15	0.14
25...	1130	--	1.80	--	0.40	0.21	2.2	2.0	0.14	0.10	--
AUG											
06...	1110	0.01	1.90	<0.015	0.40	0.20	2.3	2.1	0.15	0.10	0.15
SEP											
19...	1020	<0.01	1.50	0.07	0.60	0.40	2.1	1.9	0.19	0.10	0.13

The following analysis is a quality assurance sample processed during the 1996 water year and is defined in the explanation of records section entitled, "Water Quality-Control Data."

DATE	TIME	QUALITY ASSURANCE SAMPLE (TYPE)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)
AUG 1996										
06...	1000	FIELD BLANK	<0.01	0.05	<0.015	<0.2	<0.2	<0.01	<0.01	<0.01

WATER COLUMN NUTRIENT ANALYSES PERFORMED BY THE NEW JERSEY DEPARTMENT OF HEALTH, PUBLIC HEALTH, AND ENVIRONMENTAL LABORATORIES

DATE	TIME	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)
NOV 1995				
01...	1130	0.011	0.05	0.04
JAN 1996				
23...	1300	0.009	0.08	0.06
MAR				
28...	1230	0.018	<0.03	<0.03
JUN				
10...	1130	0.033	0.09	0.09
JUL				
25...	1130	0.011	<0.03	<0.03

p.9

WATER QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

WATER COLUMN PESTICIDE ANALYSES. The following analyses are samples collected as part of the Long Island - New Jersey Coastal Plain NAWQA Program. Selected samples were analyzed for pesticides on schedule 2001 (listed with minimum reporting levels on p. 18). Selected samples were analyzed for additional pesticides on schedule 2050 (listed with minimum reporting levels on p. 18). Only pesticides measured at or above the reporting level in one or more samples are listed in the water quality tables.

DATE	TIME	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DI-AZINON, DIS-SOLVED (UG/L) (39572)
MAY 1996												
08...	1210	<0.002	0.008	0.052	E0.013	<0.002	E0.036	<0.003	<0.004	0.008	E0.003	<0.002
22...	1040	<0.002	0.006	0.060	E0.018	<0.002	E0.020	<0.003	<0.004	<0.004	E0.002	<0.002
JUN												
13...	1000	0.540	1.50	E5.70	E0.150	<0.002	E0.130	<0.010	0.035	0.220	0.007	0.015
JUL												
09...	1100	<0.002	0.140	0.670	E0.048	<0.002	E0.074	E0.008	0.012	0.054	0.012	0.100
AUG												
06...	1110	<0.002	0.016	0.098	E0.011	<0.002	E0.036	<0.003	<0.004	<0.004	E0.002	0.037
SEP												
19...	1020	<0.002	0.008	0.034	E0.013	<0.002	E0.158	<0.003	<0.004	<0.004	0.006	0.045

DATE	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	FONOFOS WATER DISS REC (UG/L) (04095)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PRO-METON, WATER, DISS, REC (UG/L) (04037)
MAY 1996											
08...	<0.001	<0.003	<0.002	<0.005	0.035	<0.004	<0.004	<0.003	<0.004	<0.004	0.023
22...	<0.001	<0.003	<0.002	<0.005	0.051	<0.004	<0.004	<0.003	<0.004	<0.004	E0.013
JUN											
13...	<0.001	<0.003	0.170	<0.005	E5.20	0.110	<0.004	<0.003	<0.004	0.046	0.043
JUL											
09...	<0.001	<0.003	--	<0.005	0.280	0.010	<0.004	<0.003	<0.004	0.013	0.060
AUG											
06...	<0.001	<0.003	<0.002	<0.005	0.110	<0.004	<0.004	<0.003	<0.004	<0.004	0.025
SEP											
19...	<0.001	<0.003	<0.002	<0.005	0.051	<0.004	<0.004	<0.003	<0.004	<0.004	0.039

DATE	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CHLORO-THALO-NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	2,4-D, DIS-SOLVED (UG/L) (39732)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)
MAY 1996											
08...	0.013	<0.010	<0.013	<0.001	<0.002	<0.008	<0.035	<0.035	<0.020	<0.035	<0.018
22...	0.007	<0.010	<0.013	<0.001	<0.002	<0.008	<0.035	<0.035	E0.060	<0.035	<0.018
JUN											
13...	0.097	<0.010	<0.013	<0.001	<0.002	0.040	<0.035	<0.035	E0.007	0.040	0.190
JUL											
09...	0.055	<0.010	<0.013	<0.001	0.006	<0.008	<0.035	0.490	E1.20	<0.035	<0.018
AUG											
06...	0.030	<0.010	<0.013	<0.001	<0.002	--	--	--	--	--	--
SEP											
19...	0.010	<0.010	<0.013	<0.001	<0.002	--	--	--	--	--	--

p.10

01403300 RARITAN RIVER AT QUEENS BRIDGE AT BOUND BROOK, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

WATER COLUMN VOLATILE ORGANIC COMPOUND ANALYSES. The following analyses are samples collected as part of the Long Island - New Jersey Coastal Plain NAWQA Program. Selected samples were analyzed for volatile organic compounds (VOCs) on custom method schedule 9090 (listed with minimum reporting levels on p. 19). Only VOCs measured at or above the reporting level in one or more samples are listed in the water quality tables.

DATE	TIME	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L) (34506)	FREON-113 WATER UNFLTRD REC (UG/L) (77652)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L) (34496)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L) (34541)	METHANE BROMO CHLORO-WAT UNFLTRD REC (UG/L) (77297)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L) (32101)
MAY 1996							
08...	1209	<0.050	<0.050	<0.050	<0.050	<0.100	E0.080
22...	1039	<0.050	<0.050	<0.050	<0.050	<0.100	0.350
JUN							
13...	0959	<0.100	<0.100	<0.100	<0.100	<0.200	E0.120
JUL							
09...	1059	<0.100	<0.100	<0.100	<0.100	<0.200	E0.180
AUG							
06...	1109	<0.100	<0.100	<0.100	<0.100	<0.200	E0.100
SEP							
19...	1019	<0.100	<0.100	<0.100	<0.100	<0.200	0.200

DATE	CHLORO-DI-BROMO-METHANE TOTAL (UG/L) (32105)	CHLORO-ETHANE TOTAL (UG/L) (34311)	METHYL-CHLO-RIDE TOTAL (UG/L) (34418)	METHYL-ENE CHLO-RIDE TOTAL (UG/L) (34423)	METHYL IODIDE WATER UNFLTRD RECOVER (UG/L) (77424)	BROMO-FORM TOTAL (UG/L) (32104)	CHLORO-FORM TOTAL (UG/L) (32106)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L) (34501)	VINYL CHLO-RIDE TOTAL (UG/L) (39175)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L) (34475)
MAY 1996										
08...	<0.100	<0.100	<0.200	<0.100	<0.05	<0.200	0.230	<0.100	<0.100	E0.020
22...	E0.090	<0.100	<0.200	<0.100	<0.05	<0.200	1.00	<0.100	<0.100	E0.030
JUN										
13...	<0.200	<0.200	<0.400	<2.10	<0.10	<0.400	0.320	<0.200	<0.200	<0.100
JUL										
09...	0.200	<0.200	<0.400	E0.160	<0.10	<0.400	E0.200	<0.200	<0.200	<0.100
AUG										
06...	E0.050	<0.200	<0.400	<0.120	<0.10	<0.400	0.300	<0.200	<0.200	E0.030
SEP										
19...	E0.060	<0.200	<0.400	<0.200	<0.10	<0.400	0.590	<0.200	<0.200	<0.100

DATE	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L) (39180)	CIS-1,2-DI-CHLORO-ETHENE WATER TOTAL (UG/L) (77093)	BENZENE TOTAL (UG/L) (34030)	STYRENE TOTAL (UG/L) (77128)	BENZENE 124-TRI METHYL UNFILT RECOVER (UG/L) (77222)	O-XYLENE WATER WHOLE TOTAL (UG/L) (77135)	META/PARA-XYLENE WATER UNFLTRD REC (UG/L) (85795)	ETHYL-BENZENE TOTAL (UG/L) (34371)	TOLUENE TOTAL (UG/L) (34010)	P-ISO-PROPYL-TOLUENE WATER WHOLE REC (UG/L) (77356)
MAY 1996										
08...	E0.010	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	E0.060	<0.050
22...	E0.010	<0.050	0.120	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
JUN										
13...	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
JUL										
09...	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
AUG										
06...	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
SEP										
19...	E0.010	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100

DATE	BENZENE O-DI-CHLORO-WATER UNFLTRD REC (UG/L) (34536)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L) (34571)	CHLORO-BENZENE TOTAL (UG/L) (34301)	METHYL-ETHYL-KETONE WATER WHOLE TOTAL (UG/L) (81595)	ACETONE WATER WHOLE TOTAL (UG/L) (81552)	ETHER ETHYL-WATER UNFLTRD RECOVER (UG/L) (81576)	METHYL TERT-BUTYL ETHER WAT UNF REC (UG/L) (78032)	FURAN TETRA-HYDRO-WATER UNFLTRD RECOVER (UG/L) (81607)	ETHER TERT-PENTYL METHYL-UNFLTRD RECOVER (UG/L) (50005)	CARBON DI. SULFIDE WATER WHOLE TOTAL (UG/L) (77041)
MAY 1996										
08...	<0.050	<0.050	E0.010	E0	<5	<0.10	0.330	<5.00	<0.100	E0
22...	<0.050	<0.050	E0.030	<5	<5	<0.10	0.270	<5.00	<0.100	<0
JUN										
13...	<0.100	<0.100	<0.100	<10	<10	<0.20	<0.200	<10.0	<0.200	<0
JUL										
09...	E0.060	<0.100	<0.100	<10	7	<0.20	E0.200	<10.0	<0.200	E0
AUG										
06...	<0.100	<0.100	E0.020	<10	<10	0.72	0.270	<10.0	<0.200	<0
SEP										
19...	<0.100	<0.100	E0.009	<10	<10	<0.20	0.310	<10.0	<0.200	<0

p.11

REFERENCE 34

U.S. DEPARTMENT OF COMMERCE
Luther H. Hodges, Secretary

WEATHER BUREA
F. W. Reichelderfer, Ch

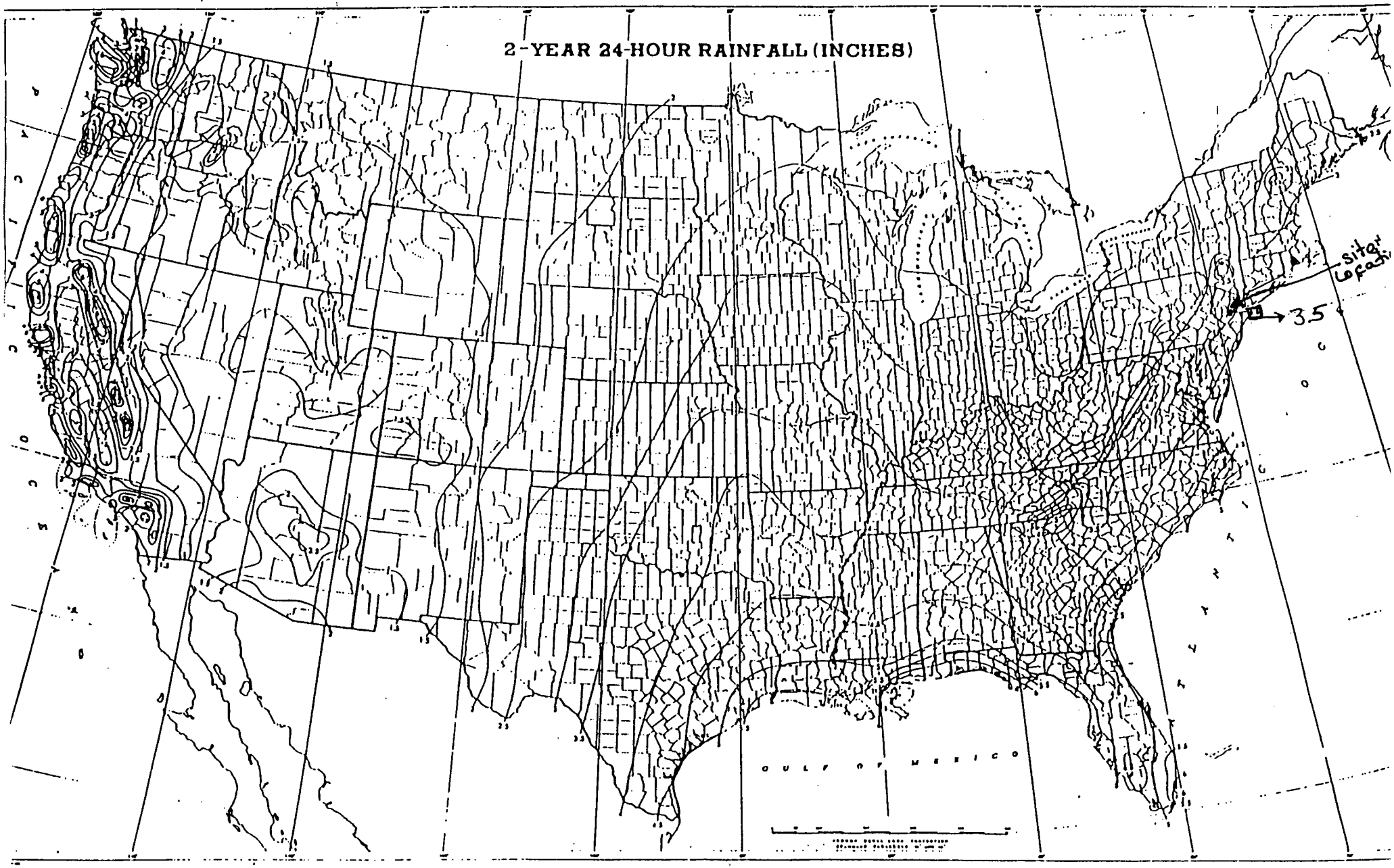
TECHNICAL PAPER NO. 40

RAINFALL FREQUENCY ATLAS OF THE UNITED STATES

for Durations from 30 Minutes to 24 Hours and Return Periods from 1 to 100 Years

Prepared by
DAVID M. HERSHFIELD
Cooperative Studies Section, Hydrologic Services Division
for
Engineering Division, Soil Conservation Service
U.S. Department of Agriculture

[redacted]


2-YEAR 24-HOUR RAINFALL (INCHES)
3.5
site location
GULF OF MEXICO

REFERENCE 35

:NCE MARKS

ON OF LOCATION

ber storage 0.3 mile east on Metuchen
Metuchen and Kentile Roads. Estab-

2 foot below the ground and center-
t side of New Brunswick Avenue in
Established by URS/MSR Engineers.

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620, or (800) 424-8872.

APPROXIMATE SCALE

400 0 400 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

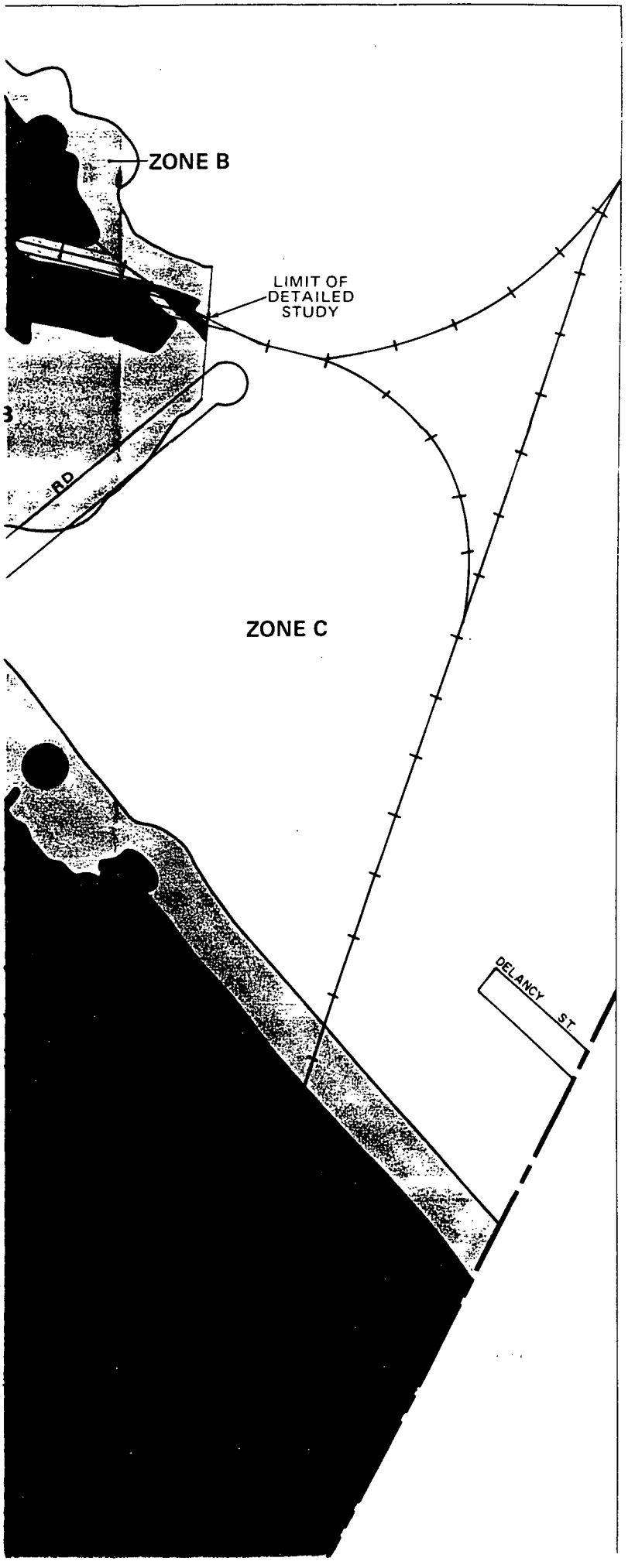
BOROUGH OF
SOUTH PLAINFIELD, NEW JERSEY
MIDDLESEX COUNTY

PANEL 3 OF 5
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
340279 0003 B

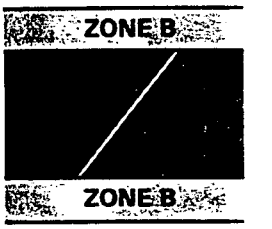
EFFECTIVE DATE:
AUGUST 1, 1980

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
FEDERAL INSURANCE ADMINISTRATION



KEY TO MAP

500-Year Flood Boundary
100-Year Flood Boundary
Zone Designations* With Date of Identification e.g., 12/2/74
100-Year Flood Boundary
500-Year Flood Boundary



Base Flood Elevation Line With Elevation In Feet** — 513

Base Flood Elevation in Feet Where Uniform Within Zone** — (EL 987)

Elevation Reference Mark — RM7 ×

River Mile — • M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

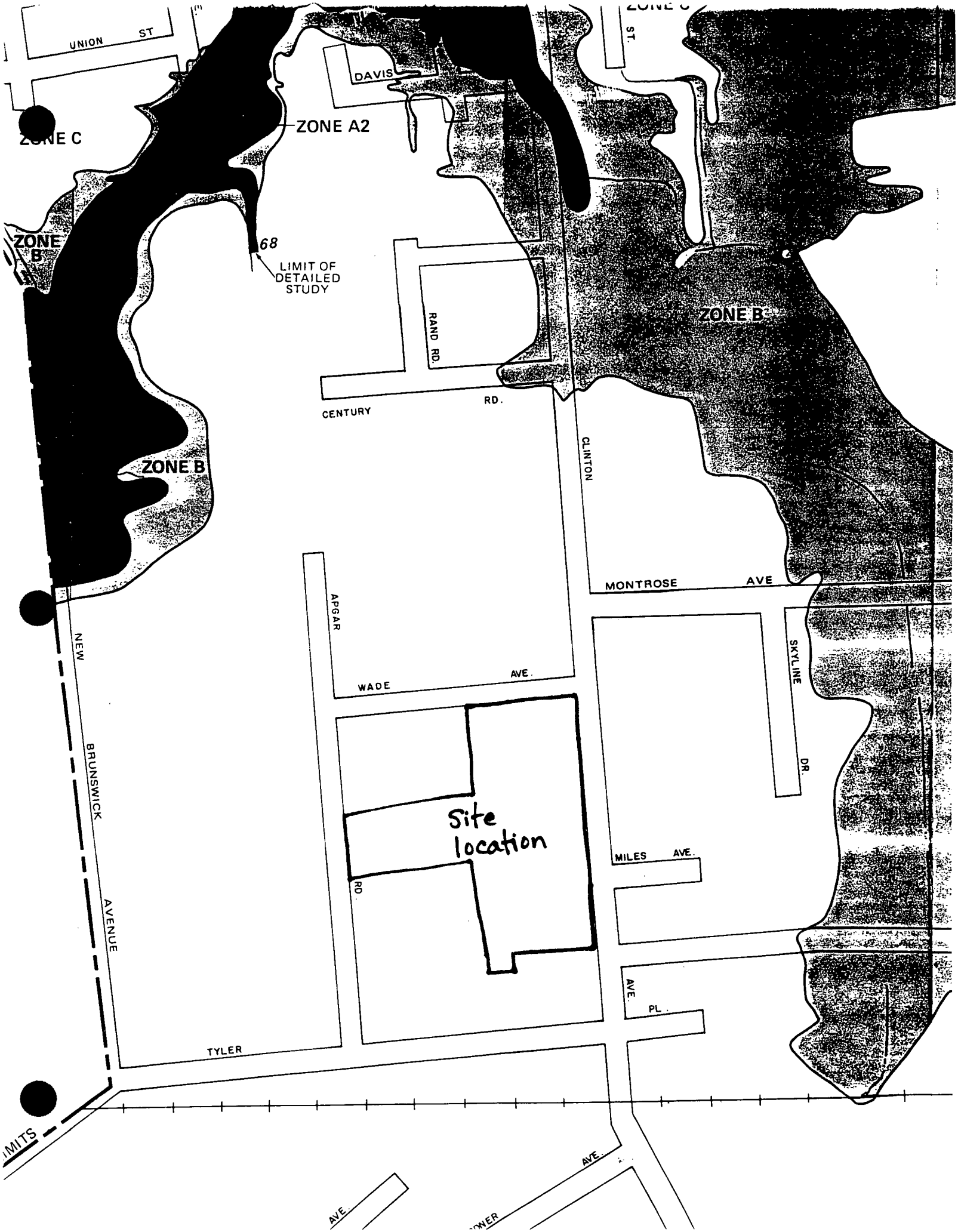
Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

INITIAL IDENTIFICATION:
FEBRUARY 22, 1974

FLOOD HAZARD BOUNDARY MAP REVISIONS:
MARCH 5, 1976


UNION ST
DAVIS
ZONE C
ZONE A2
ZONE B
68
LIMIT OF DETAILED STUDY
RAND RD.
CENTURY RD.
ZONE B
ZONE B
CLINTON
MONTROSE AVE
APGAR
WADE AVE.
SKYLINE DR.
NEW BRUNSWICK AVENUE
Site location
MILES AVE.
RD.
AVE. PL.
TYLER
AVE.
AVE.

REFERENCE 36

Surface Water Quality Standards

N. J. A. C. 7:9B

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

Office Of Environmental Planning
April 1998

p.1

"DRBC" means Delaware River Basin Commission.

"EC50" means the median effective concentration of a toxic substance expressed as a statistical estimate of the concentration that has a specified adverse effect on 50 percent of the test organisms under specified test conditions, based on the results of an acute bioassay.

"Epilimnion" means the freely circulating upper region of a thermally stratified waterbody extending from the surface to the thermocline.

"Existing uses" means those uses actually attained in the waterbody on or after November 28, 1975, whether or not they are included in the Surface Water Quality Standards.

"Federal Act" means the "Federal Water Pollution Control Act" (33 U.S.C. § 1251 et seq.), commonly referred to as the Clean Water Act, including all subsequent supplements and amendments.

"Flow-through bioassay" means a toxicity test in which the test solutions flow into and out of the test chambers on a once-through basis for the duration of the test, in accordance with N.J.A.C. 7:18.

"Fresh water(s)" means all nontidal and tidal waters generally having a salinity, due to natural sources, of less than or equal to 3.5 parts per thousand at mean high tide.

"FW" means the general surface water classification applied to fresh waters.

"FW1" means those fresh waters, as designated in N.J.A.C. 7:9B-1.15(h) Table 6, that are to be maintained in their natural state of quality (set aside for posterity) and not subjected to any man-made wastewater discharges or increases in runoff from anthropogenic activities. These waters are set aside for posterity because of their clarity, color, scenic setting, other characteristic of aesthetic value, unique ecological significance, exceptional recreational significance, exceptional water supply significance, or exceptional fisheries resource(s).

"FW2" means the general surface water classification applied to those fresh waters that are not designated as FW1 or Pinelands Waters.

"Groundwater" means that portion of water beneath the land surface that is within the zone of saturation (below the water table) where pore spaces are filled with water.

"Heat dissipation area" means a mixing zone, as may be designated by the Department, into which thermal effluents may be discharged for the purpose of mixing, dispersing, or dissipating such effluents without creating nuisances, hazardous

p.2

"Nonpoint source" or "NPS" means:

1. Any man-made or man-induced activity, factor, or condition, other than a point source, from which pollutants are or may be discharged;
2. Any man-made or man-induced activity, factor, or condition, other than a point source, that may temporarily or permanently change any chemical, physical, biological, or radiological characteristic of waters of the State from what was or is the natural, pristine condition of such waters, or that may increase the degree of such change; or
3. Any activity, factor, or condition, other than a point source, that contributes or may contribute to water pollution.

"Nontrout waters" means fresh waters that have not been designated in N.J.A.C. 7:9B-1.15(b) through (h) as trout production or trout maintenance. These waters are generally not suitable for trout because of their physical, chemical, or biological characteristics, but are suitable for a wide variety of other fish species.

"NPDES" means National Pollutant Discharge Elimination System.

"NT" means nontrout waters.

"Nutrient" means a chemical element or compound, such as nitrogen or phosphorus, which is essential to and promotes the growth and development of organisms.

"Outstanding National Resource Waters" means high quality waters that constitute an outstanding national resource (for example, waters of National/State Parks and Wildlife Refuges and waters of exceptional recreational or ecological significance) as designated in N.J.A.C. 7:9B-1.15(i).

"Persistent" means relatively resistant to degradation, generally having a half life of over 96 hours.

"Pinelands waters" means all waters within the boundaries of the Pinelands Area, except those waters designated as FW1 in N.J.A.C. 7:9B-1.15(h) Table 6, as established in the Pinelands Protection Act (N.J.S.A. 13:18A-1 et seq.) and shown on Plate 1 of the "Comprehensive Management Plan" adopted by the New Jersey Pinelands Commission in November 1980.

"PL" means the general surface water classification applied to Pinelands Waters.

"Point source" or "PS" means any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

"Pollutant" means any dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, refuse, oil, grease, sewage sludge, munitions, chemical wastes, biological materials, medical wastes, radioactive substance (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. § 2011 et. seq.)), thermal waste, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, agricultural and construction waste or runoff or other residue discharged directly or indirectly to the land, ground waters or surface waters of the State, or to a domestic treatment works as defined at N.J.A.C. 7:14A-1.2. "Pollutant" includes both hazardous and nonhazardous pollutants.

"Primary contact recreation" means water related recreational activities that involve significant ingestion risks and includes, but is not limited to, wading, swimming, diving, surfing, and water skiing.

"Public hearing" means a legislative type hearing before a representative or representatives of the Department providing the opportunity for public comment, but does not include cross-examination.

"River mile" or "R.M." means the distance, measured in statute miles, between two locations on a stream, with the first location designated as mile zero. For example, mile zero for the Delaware River is located at the intersection of the center line of the navigation channel and a line between the Cape May Light, New Jersey, and the tip of Cape Henlopen, Delaware.

"Saline waters" means waters having salinities generally greater than 3.5 parts per thousand at mean high tide.

"SC" means the general surface water classification applied to coastal saline waters.

"SE" means the general surface water classification applied to saline waters of estuaries.

"Secondary contact recreation" means recreational activities where the probability of water ingestion is minimal and includes, but is not limited to, boating and fishing.

"Shellfish" means those mollusks commonly known as clams, oysters, or mussels.

"Shellfish waters" means waters classified as Approved, Seasonally Approved, Special Restricted, Seasonally Special Restricted or Condemned that support or possess the potential to support shellfish which are within the Coastal Area Facility Review Act (C.A.F.R.A.) zone as delineated in 1973, (excluding: 1 - The Cohansey River upstream of Brown's Run; 2 - The Maurice River upstream of Route 548; 3 - The Great Egg Harbor River upstream of Powell Creek; 4 - The Tuckahoe River upstream of Route 50; 5 - The Mullica River upstream of the Garden State Parkway) plus the adjacent areas between Route 35 (from its juncture with the C.A.F.R.A. zone just north of Red Bank to

(g) In those cases in which a thermal discharge is involved, the procedures for reclassifying segments for more restrictive uses shall be consistent with section 316 of the Federal Clean Water Act.

7:9B-1.12 Designated uses of FW1, PL, FW2, SE1, SE2, SE3, and SC waters

(a) In all FW1 waters the designated uses are:

1. Set aside for posterity to represent the natural aquatic environment and its associated biota;

2. Primary and secondary contact recreation;

3. Maintenance, migration and propagation of the natural and established aquatic biota; and

4. Any other reasonable uses.

(b) In all PL waters the designated uses are:

1. Cranberry bog water supply and other agricultural uses;

2. Maintenance, migration and propagation of the natural and established biota indigenous to this unique ecological system;

3. Public potable water supply after conventional filtration treatment (a series of processes including filtration, flocculation, coagulation, and sedimentation, resulting in substantial particulate removal but no consistent removal of chemical constituents) and disinfection;

4. Primary and secondary contact recreation; and

5. Any other reasonable uses.

(c) In all FW2 waters the designated uses are:

1. Maintenance, migration and propagation of the natural and established biota;

2. Primary and secondary contact recreation;

3. Industrial and agricultural water supply;

4. Public potable water supply after conventional filtration treatment (a series of processes including filtration, flocculation, coagulation, and

p.5

sedimentation, resulting in substantial particulate removal but no consistent removal of chemical constituents) and disinfection; and

5. Any other reasonable uses.

(d) In all SE1 waters the designated uses are:

1. Shellfish harvesting in accordance with N.J.A.C. 7:12;

2. Maintenance, migration and propagation of the natural and established biota;

3. Primary and secondary contact recreation; and

4. Any other reasonable uses.

(e) In all SE2 waters the designated uses are:

1. Maintenance, migration and propagation of the natural and established biota;

2. Migration of diadromous fish;

3. Maintenance of wildlife;

4. Secondary contact recreation; and

5. Any other reasonable uses.

(f) In all SE3 waters the designated uses are:

1. Secondary contact recreation;

2. Maintenance and migration of fish populations;

3. Migration of diadromous fish;

4. Maintenance of wildlife; and

5. Any other reasonable uses.

(g) In all SC waters the designated uses are:

1. Shellfish harvesting in accordance with N.J.A.C. 7:12;

p.6

7:9B-1.15 Surface water classifications for the waters of the State of New Jersey

(a) This section contains the surface water classifications for the waters of the State of New Jersey. Surface water classifications are presented in tabular form. Subsections (c) through (g) contain surface water classifications by major drainage basin. Subsection (h) lists FW1 waters by tract within basins and subsection (i) identifies the Outstanding National Resource Waters of the State.

(b) The following are instructions for the use of Tables 1 through 5 found in N.J.A.C. 7:9B-1.15(c) through (g) respectively:

1. The surface water classification tables give the surface water classifications for waters of the State. Surface waters of the State and their classification are listed in the table covering the major drainage basin in which they are located. The major drainage basins are:
   i. The Atlantic Coastal drainage basin which contains the surface waters listed in Table 1 in (c) below;
   ii. The Delaware River drainage basin which contains the surface waters listed in Table 2 in (d) below;
   iii. The Passaic River, Hudson River and New York Harbor Complex drainage basin which contains the surface waters listed in Table 3 in (e) below;
   iv. The Raritan River and Raritan Bay drainage basin which contains the surface waters listed in Table 4 in (f) below; and
   v. The Wallkill River drainage basin which contains the surface waters listed in Table 5 in (g) below.

2. Within each basin the waters are listed alphabetically and segment descriptions begin at the headwaters and proceed downstream.

3. To find a stream:
   i. Determine which major drainage basin the stream is in;
   ii. Look for the name of the stream in the appropriate table and find the classification;
   iii. For unnamed or unlisted streams, find the stream or other waterbody that the stream of interest flows into and look for the classification of that stream or waterbody. The classification of the stream of interest may then be determined by referring to (b)5 below. If the second stream or waterbody is also unlisted, repeat the process until a listed stream or waterbody is found. Use (b)5iv below to classify streams entering unlisted lakes.

4. To find a lake or other non-stream waterbody:
   i. Determine which major drainage basin the waterbody is in;
   ii. Look for the waterbody name in the appropriate table;
   iii. If the waterbody is not listed, use (b)5ii, 5iii, 5vi, and 5vii below to determine the appropriate classification.

p. 7

5. To find unnamed waterways or waterbodies or named waterways or waterbodies which do not appear in the listing, use the following instructions:
   i. Unnamed or unlisted freshwater streams that flow into streams classified as FW2-TP, FW2-TM, or FW2-NT take the classification of the classified stream they enter, unless the unlisted stream is a PL water which is covered in (b)5vii below. If the stream could be a C1 water, see (b)5vi below.
   ii. All freshwater lakes, ponds and reservoirs that are five or more acres in surface area, that are not located entirely within the Pinelands Area boundaries (see (b)5vii below) and that are not specifically listed as FW2-TP or FW2-TM are classified as FW2-NT. This includes lakes, ponds and reservoirs on segments of streams which are classified as FW2-TM or FW2-TP such as Saxton Lake on the Musconetcong River. If the waterbody could be a C1 water, also check (b)5vi below.
   iii. All freshwater lakes, ponds and reservoirs, that are less than five acres in surface area, upstream of and contiguous with FW2-TP or FW2-TM streams, and which are not located entirely within the Pinelands Area boundaries (see(b)5vii below) are classified as FW2-TM. All other freshwater lakes, ponds and reservoirs that are not otherwise classified in this subsection or the following tables are classified as FW2-NT. If the waterbody could be a C1 water, also check (b)5vi below.
   iv. Unnamed or unlisted streams that enter FW2 lakes, ponds and reservoirs take the classification of either the listed tributary stream flowing into the lake with the highest classification or the listed tributary stream leaving the lake with the highest classification, whichever has the highest classification, or, if there are no listed tributary or outlet streams to the lake, the first listed stream downstream of the lake. If the stream is located within the boundaries of the Pinelands Area, see (b)5.vii. below; if it could be a C1 water, also see (b)5vi below.
   v. Unnamed or unlisted saline waterways and waterbodies are classified as SE1 in the Atlantic Coastal Basin. Unnamed or unlisted saline waterways which enter SE2 or SE3 waters in the Passaic, Hackensack and New York Harbor Complex basin are classified as SE2 unless otherwise classified within Table 3 in (e) below. Freshwater portions of unnamed or unlisted streams entering SE1, SE2, or SE3 waters are classified as FW2-NT. This only applies to waters that are not PL waters (see (b)5vii below). If the waterbody or waterway could be a C1 water, also see (b)5vi below.
   vi. If the waterway or waterbody of interest flows through or is entirely located within State parks, forests or fish and game lands, Federal wildlife refuges, other special holdings, or is a State shellfish water as defined in this subchapter, the Department's maps should be checked to determine if the waterbody of interest is mapped as a C1 water. If the waterway or waterbody does not appear on the United States Geological Survey quadrangle that the Department used as a base map in its designation of the C1 waters, the Department will determine on a case-by-case basis whether the waterway or waterbody should be designated as C1.

(f) The surface water classifications in Table 4 are for waters of the Raritan River and Raritan Bay Basin:

TABLE 4

Waterbody	Classification
ALLERTON CREEK (Allerton) - Entire length	FW2-NT
AMBROSE BROOK (Piscataway) - Entire length	FW2-NT
AMWELL LAKE (Syndertown)	FW2-NT(C1)
ASSISCONG CREEK (Flemington) - Entire length	FW2-NT
BACK BROOK (Vanliew's Corners) - Entire length	FW2-NT
BALDWINS CREEK	
(Pennington) - Entire length, except segment described separately below	FW2-NT
(Baldwin) - Segment within the boundaries of Baldwin Lake Wildlife Management Area	FW2-NT(C1)
BARCLAY BROOK (Redshaw Corners) - Entire length	FW2-NT
BEAVER BROOK	
(Cokesbury) - Source to Reformatory Road bridge	FW2-TP(C1)
(Annandale) - Reformatory Rd. bridge to Raritan River, South Branch	FW2-TM
BEDEN BROOK (Montgomery) - Entire length	FW2-NT
BIG BEAR BROOK (West Windsor) - Entire length	FW2-NT
BIG BROOK (Vanderberg) - Entire length	FW2-NT
BLACK BROOK (Polktown) - Entire length	FW2-TP(C1)
BLACK RIVER - See LAMINGTON RIVER	
BLACKBERRY CREEK	
(Oceanport) - Source to a line beginning on the easternmost extent of Gooseneck Point and bearing approximately 162 degrees True North to its terminus on the westernmost extent of an unnamed point of land in the vicinity of the western extent of Cayuga Ave. in Oceanport.	SE1
(Oceanport) - Creek below the line described above	SE1(C1)
BLUE BROOK (Mountainside) - Entire length	FW2-NT
BOULDER HILL BROOK (Tewksbury) - Entire length	FW2-TP(C1)
BOUND BROOK (Dunellen) - Entire length	FW2-NT
BRANCHPORT CREEK	
(Long Branch) - Source to a line beginning on the northernmost extent of an unnamed point of land lying north of Pocano Ave. in Oceanport and bearing approximately 055 degrees True North to its terminus on the westernmost	FW2-NT/SE1

GREEN BROOK	
(Watchung) - Source to Rt. 22 bridge	FW2-TM
(Plainfield) - Rt. 22 bridge to Bound Brook	FW2-NT
GUINEA HOLLOW BROOK (Tewksbury)	FW2-TP(C1)
HACKLEBARNEY BROOK (Hacklebarney) - Entire length	FW2-TP(C1)
HEATHCOTE BROOK (Kingston) - Entire length	FW2-NT
HERZOG BROOK (Pottersville) - Entire length	FW2-TP(C1)
HICKORY RUN (Califon) - Entire length	FW2-TP(C1)
HOCKHOCKSON BROOK (Colts Neck) - Entire length	FW2-TM
HOLLAND BROOK (Readington) - Entire length	FW2-NT
HOLLOW BROOK (Pottersville) - Entire length	FW2-TP(C1)
HOOKS CREEK LAKE (Cheesequake State Park)	FW2-NT(C1)
HOOPSTICK BROOK (Bedminister) - Entire length	FW2-NT
INDIA BROOK (NORTH BRANCH, RARITAN RIVER)	
(Randolph) - Entire length	FW2-TP(C1)
IRELAND BROOK (Paulus Corners) - Entire length	FW2-NT
IRESICK BROOK (Spotswood) - Entire length	FW2-NT
KRUEGER'S BROOK - (Flanders) - Entire length	FW2-TP(C1)
LAMINGTON RIVER (BLACK RIVER)	
(Succasunna) - Source to Rt. 206 bridge	FW2-NT(C1)
(Milltown) - Rt. 206 bridge to confluence with Rinehart Brook	FW2-TM(C1)
(Pottersville) - Confluence with Rinehart Brook to Camp Brady bridge, Bedminister	FW2-TP(C1)
(Vliettown) - Camp Brady bridge to Rt. 523 bridge	FW2-TM
(Burnt Mills) - Rt. 523 to North Branch, Raritan River	FW2-NT
TRIBUTARY (Ironia) - Source downstream to, but not including, Bryant Pond	FW2-TP(C1)
LAWRENCE BROOK	
(Deans) - Source to the intake of the New Brunswick Water Department at Weston's Mill Dam	FW2-NT
(New Brunswick) - Weston's Mill Dam to Raritan River	SE1
LEDGEWOOD BROOK (Ledgewood) - Entire length	FW2-TP(C1)
LITTLE BROOK (Califon) - Entire length	FW2-TP(C1)
LITTLE SILVER CREEK	
(Shrewsbury) - Source to a line beginning on the eastern bank of that unnamed lagoon located between Wardell Ave. and Oakes Rd. in Rumson and bearing approximately 171 degrees T (True North) to its terminus on the south shore of Little Silver Creek	FW2-NT/SE1
(Rumson) - Creek below line described above	SE1(C1)
LOMERSON BROOK - See HERZOG BROOK	
MANALAPAN BROOK	
(Jamesburg) - Source to Duhernal Lake dam, except tributary described separately below	FW2-NT

p.10

RARITAN RIVER	
NORTH BRANCH (Also see INDIA BROOK)	
(Pleasant Valley) - Source to, but not including, Ravine Lake	FW2-TP(C1)
(Far Hills) - Ravine Lake dam to Rt. 512 bridge	FW2-TM
(Bedminister) - Rt. 512 bridge to confluence with South Branch, Raritan River	FW2-NT
SOUTH BRANCH RARITAN RIVER	
(Mt. Olive) - Source to the dam that is 390 feet upstream of the Flanders-Drakestown Road bridge and the two tributaries which originate north and east of the Budd Lake Airfield	FW2-NT(C1)
(Mt. Olive) - Dam to confluence with Turkey Brook	FW2-TM(C1)
(Middle Valley) - Confluence with Turkey Brook to Rt. 512 bridge	FW2-TP(C1)
(Califon) - Rt. 512 bridge to downstream end of Packers Island, except segment described separately, below	FW2-TM
(Ken Lockwood Gorge) - River and tributaries within Ken Lockwood Gorge Wildlife Management Area	FW2-TM(C1)
(Neshanic Sta.) - Downstream end of Packers Island to confluence with North Branch, Raritan River	FW2-NT
TRIBUTARIES, SOUTH BRANCH RARITAN RIVER	
(Long Valley) - Entire length	FW2-TP(C1)
(S. of Hoffmans) - Entire length	FW2-TP(C1)
(S. of Schooley's Mt.) - Entire length	FW2-TP(C1)
MAIN STEM RARITAN RIVER	
(Bound Brook) - From confluence of North and South Branches to Landing Lane bridge in New Brunswick and all freshwater tributaries downstream of Landing Lane bridge.	FW2-NT
(Sayreville) - Landing Lane bridge to Raritan Bay and all saline water tributaries	SE1
RINEHART BROOK (Hacklebarney) - Entire length	FW2-TP(C1)
ROCK BROOK (Montgomery) - Entire length	FW2-NT
ROCKAWAY CREEK	
NORTH BRANCH	
(Mountainville) - Source to Rt. 523 bridge	FW2-TP(C1)
(Whitehouse) - Rt. 523 bridge to confluence with South Branch	FW2-TM
SOUTH BRANCH (Whitehouse) - Entire length	FW2-TM
MAIN STEM (Whitehouse) - Confluence of North and South Branches to Lamington River	FW2-NT
ROCKY RUN - (Lebanon) - Entire length	FW2-TP(C1)
ROUND VALLEY RESERVOIR (Clinton)	FW2-TP

p.11